

ENTERTAINMENT WEEKLY AND THE NEW YORK TIMES MAGAZINE

AIR TRANSPORTATION

★ ★ ★ INCLUDING AIR SHIPPING ★ ★ ★



Vol. 20

No. 2

FEATURED IN THIS ISSUE

FEBRUARY 1952

AIR COMMERCE

HELICOPTERS ARE HERE TO STAY



Airport at Oakland

We Fly Flavor



Trade With the Orient . . . by Air

Freight Takes to the Air





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WORLD'S FIRST AIRLINE



AIR **TRANSPORTATION**

The World's First and Only Air Cargo
Magazine . . . Established
October, 1942



MEMBER OF CONTROLLED CIRCULATION
AUDIT, INC.

AIR TRANSPORTATION, published once each month, thoroughly covers the entire air cargo industry for the benefit of all those engaged in shipping and handling domestic and international air freight, air express, and air parcel post, as well as using the domestic and international air mail services. Included in **AIR TRANSPORTATION'S** wide coverage are: air shipping, cargo plane development, rates, packaging, materials handling, documentation, air cargo terminal development, insurance, routing, interline procedures, new equipment, commercial airlines, military air transport service, air freight forwarders, personnel and business air travel.

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Airport at Oakland

By DUDLEY W. FROST

President, Oakland Board of Port Commissioners

CENTRALLY located in an expanding industrial area at the gateway to the Pacific, Oakland Municipal Airport is fast becoming known as one of the most advantageous air terminals in America.

Situated on the eastern shore of San Francisco Bay, it is easily accessible by the six-lane Eastshore Freeway that puts it in contact with port, business, and residential districts on both sides of the Bay within a matter of minutes.

Its accessibility, good weather conditions, and the amazing growth of the East Bay area have made it an important airfreight depot as well as a passenger terminal. Since its dedication in 1927, the airport has progressed rapidly with the pace of the surrounding communities. The hum of commercial and military traffic down its extensive runways today makes the eventful flights of the past following its opening seem like decades ago.

Yet in a span of ten years, from 1927 to 1937, Oakland Airport was either the origin port or destination of sixteen historical flights that attracted world wide attention. Most notable of these were Sir Charles Kingsford-Smith's completed circumnavigation of the globe at Oakland; and Amelia Earhart's ill-fated round-the-world flight that left Oakland on March 17, 1937.

These were the pioneers of the past, but now a new breed of airmen, the airfreighters, are concluding a period of pioneering that has included this airport as a base of operations. Acting on the success of military air shipments in the last war, commercial airfreighters began operations at Oakland in 1945, and the field soon became an important point for service between the continental United States and the Pacific area as well as the Atlantic seaboard.

One such carrier to the Pacific area is Transocean Air Lines with its main base at the Oakland Airport. Even though most airfreight can no longer be termed unusual, much of it is at least interesting. In the commercial phase of its cargo operations, Transocean was privileged to fly rush cargo to countries which needed it to attempt an economic comeback after the physical and



moral devastation of the Pacific war.

With the egg basket of the world at Petaluma, California, Oakland became a shipping center for poultry bound for the Philippines to bolster that nation's food economy. In 1946, Transocean carried 100,000 leghorns and New Hampshire chicks, warm from their Petaluma hatcheries, on a 7,500 mile journey to Filipino farmers. Later it flew 45,000 dozens of eggs from Oakland to Guam to bolster the diet of the islanders with vitamins.

Two of the strangest cargoes were empty beer bottles and game cocks. In December of 1947, the U. S. Hydrographic office at San Diego asked Transocean to drop nests of beer bottles at 9,000 feet at specified latitudes between Oakland and Okinawa so that data on ocean currents might be gathered. Way down in the South

Pacific some visiting game cocks from Sacramento, California, beat the tails off the local birds in traditional island cock fights. The islanders soon asked for champion cocks to be flown in from the States in order to improve their breed.

At the present time the majority of planes that would be carrying cargo to the Pacific area are under contract to fly the Korean Airlift. These planes are serviced in various airline shops at Oakland, then fly to Travis Air Force Base forty-nine air miles north of Oakland. At Travis they load personnel, supplies and blood for the troops at the front.

While the Korean conflict has slowed overseas, commercial cargo, U. S. airlines are expanding Oakland service with the rest of the United States.

The advantageous connection between East Bay industry and airfreight service from the airport can be readily seen by these services rendered. An example of airfreight's position in keeping production lines moving is evident in Airborne Freight's job of carrying vital parts for the Ford Motor Company. With production at a peak, the various automobile assembly plants on the Pacific Coast often find themselves with a shortage of needed parts. The Long

(Continued on Page 27)

TRADE WITH THE *Orient* . . . BY AIR

by Alex Anderson

SINCE the development of the modern Northwest Passage to the Orient less than five years ago, the carriage of airfreight over the Northwest Airlines route between America and the Far East has grown into a million dollar business and is fast expanding. Northwest's Orient air cargo revenue for the first nine months of 1951 was \$1,921,314, and for the full year was estimated at \$2,616,613. Since Northwest's system-wide air cargo revenue figure came to \$3,500,000 for 1951, the Orient division accounted for roughly two-thirds of the gross revenue, the result of a steady growth. For 1950 it was up 30% from the previous year, 1949, which in turn was up 74% over 1948. Here are the figures:

1947*	\$143,920
1948	872,269
1949	1,520,702
1950	1,983,332

* From start of service, July 15.

Signing of the Japanese peace treaty at San Francisco, inauguration of an internal Japanese airline under the direction of Northwest Airlines, improvement of the political situation in the Philippines, and inauguration of *Stratocruiser* service by NWA after the first of the year all look toward a further stepping up of air cargo carriage between these areas and the United States during 1952.

SPEED. That is the key fact in today's commerce with the Far East.

A voyage which until recently required 28 days each way to complete, New York merchants and manufacturers have learned, can now be accomplished in 28 to 43 hours.

In just four years entire new markets for the exchange of goods between the United States and the Orient have been opened up by the development of Northwest Airlines' short-cut aerial route linking New York and the eastern seaboard of the United States with the cities of Japan, the Philippines, China, Korea, Formosa and Okinawa.

During 1950, goods worth more than \$13 million were flown as air cargo over

this modern "northwest passage" trade route over the top of the world—across northwest Canada, to Alaska, and the Aleutian Island chain—to the Orient.

Total cargo revenue earned by the airline in the carriage of this trade during 1951 was \$1,463,000.

The route was studied, charted and laid out by Northwest Airlines under the direction and leadership of Croil Hunter, its president and general manager, way back in the 1930's. Before World War II Hunter applied to the Civil Aeronautics Board for a certificate to fly the route. The application was turned down. But later, during the war, Northwest had an opportunity to prove the feasibility of airline operation in the far north.

The company set up and operated an air service to Alaska and the Aleutians carrying military supplies and personnel. It flew more than 21 million miles over the wartime routes. At war's end the pioneering work went on and in

July, 1947, NWA flew the first scheduled commercial flight over this route to Tokyo, Shanghai and Manila.

Today the airline is carrying a steadily growing volume of cargo across the Pacific. In addition Northwest Airline is a prime contractor with the Air Force in the Korean airlift.

"The Orient," in the words of one New York shipper, "is now as close as Paterson, New Jersey." And the list of commodities flying the Orient route is virtually endless. It includes drugs and medicines, clothing, machines and parts, watches, personal effects, diplomatic pouches, fountain pens, hardware, newspapers and magazines, cameras, film, pearls, silks, ceramics, and samples of everything from beer bottles to hair nets.

Take pearls. Virtually the world's entire annual output of cultured pearls is flown out of Japan. New York importers alone buy over \$3 million annually of this beautiful Oriental product.

(Continued on Page 27)



At the office of a Japanese cultured pearl "farm" near Tokyo, two Northwest Airlines stewardesses waded through a million dollars worth of pearls being prepared for air shipment to the U. S. markets.

Former training pilot for the U. S. Navy during the last war, Alex Anderson is a member of Northwest Airlines' news bureau, and frequently writes on matters of air transportation



HELICOPTERS

By Milton A. Caine, assistant

The Start of New York Airways

Facts Concerning John L. Senior, Jr., president, New York Airways, Inc.

A New Yorker by both choice and habit, Senior was born in Michigan about 35 years ago. Senior may be characterized as an aviation enthusiast. At 18, he acquired his pilot's license. After graduating from the Massachusetts Institute of Technology, he became the assistant engineer in charge of design at the Glenn L. Martin plant in Maryland, which place he eventually left to form his own aviation consultant business. Although that, as part of his career, lies well in the past, Senior is still an authority on aeronautical design, and he serves as an adviser to some of the leading airlines.

As some people change their cars, Senior changes his planes. He has owned his own helicopter, which he subsequently sold, and now owns his own plane in which he flew to California to study the operational methods of Los Angeles Airways, the prototype organization that other helicopter carriers must in some measure imitate.

New York City, one of the world's biggest and most progressive cities, is only now on the verge of getting its own helicopter service. More than four years behind Los Angeles, which pioneered in this type of operation, and about three years behind Chicago, New York will soon add its own helicopter service to the slowly growing list of cities who are discovering the need for and the full potential of helicopter utility.

New York is not entirely to blame, however. Back in 1947, two organizations battled for the privilege of flying mail, passengers and cargo via helicopter. Neither of them was able to satisfy the Civil Aeronautics Board of their ability to handle successfully so important a job. Despite the arduous battle, neither of them won; the City of New

York was tied down to surface transportation for a seemingly indefinite period of time.

Surface transportation in New York takes on a singular aspect when one considers the fact that New York is the most congested city in the United States. The means for either reaching or leaving the heart of the city are conducted through a handful of tunnels and bridges irregularly spaced around the island. Ordinances prohibiting trucks of particular length to enter midtown Manhattan, or keeping parked cars off the streets within certain specified hours, tend only to point up the staggering problem, still unsolved, of surface transportation in New York. Airmail directed to or from the city was invariably tangled in the traffic and often delayed en route to or from the

airport. Clearly a new method of transportation was necessary to save precious cargo from this time consuming burden, and that new method had to be air transportation, by way of helicopter.

With ground speeds during this almost perpetual traffic jam in New York reduced to about four or five miles per hour—or about equal with that of the pony express—and the trip out to La Guardia Field or Idlewild Airport stretched out to 45 minutes where ordinarily it might take 15, the need for helicopter service in New York was established well in advance of the suitability of the petitioners. Of the 10 applications consolidated into the proceedings, two were represented at the hearing in support of their cases, and of these two—Metropolitan Air Commuting and New York Airways—only New York Airways, mainly because of its better financial program, was authorized to fly this service.

Authorizing helicopter service in the New York area, stated the CAB by way of explanation, is "consistent with its policy to exercise its developmental powers in authorizing service of this type in the Los Angeles and Chicago areas, it is here utilizing those powers further to foster and encourage the development of a new and rapidly developing mode of transportation, with the New York area as another theatre in which to test thoroughly the practicability of this newest vehicle of air transportation. The Board believes that the expenditure by the Government of mail pay for this service will be justified by the opportunity which will be afforded for further development and experimen-

(Continued on Page 31)

ARE HERE TO STAY

editor, AIR TRANSPORTATION

Whether they are called "eggbeaters," "whirling palm trees" or simply rotary-wing craft, helicopters have proved their worth to the aviation industry and to the world at large. Public acceptance of helicopters was slow in getting under way. The newspapers and newsreels were full of these peculiar aircraft hovering in mid-air or coming down to pick up a handkerchief. There seemed to be nothing practical to which they could be put. But Clarence Belinn started his famous "Operation Whirlwind" in Los Angeles (see AIR TRANSPORTATION, October, 1951) and the war in Korea developed problems in logistics that only helicopters could solve, and helicopters, in a sense, were made. Their contributions in Korea, according to Lawrence D. Bell, president of Bell Aircraft, have cut at least 10 years off the helicopter industry's anticipated time schedule for development and

recognition.

"In little more than a year," said Bell, "the helicopter has emerged as a vital adjunct to any military program and the world has been fully awakened to its vast potential for a peacetime economy. The complete acceptance of the helicopter's usefulness by the military services has generated an impetus which has carried the industry's development to a point unattainable under normal circumstances for at least another decade."

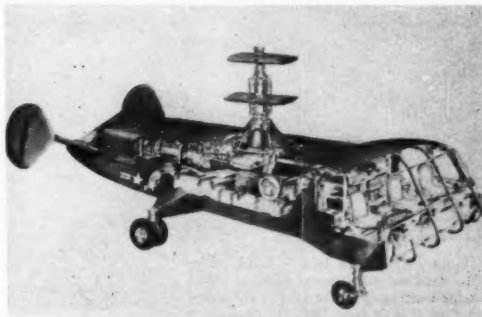
According to this, war, then, has the ability to condense time. What would have taken 10 years, due to the war in Korea took only one. What would have taken 10 years for normal air cargo

development exclusive of the use of helicopters, due to World War II took only four. And historians everywhere will tell you that the aviation industry as a whole received its greatest impetus not during the years of peacetime development, but during the years of World War I. Thus from the vast devastation that war brings something usually is salvageable that can benefit mankind. This time it was the helicopter.

Of course, to give the Korean War all the credit for developing helicopter service is to deny the visionaries of the industry their share of credit. It took a handful of people to see what the helicopter can do by way of transport-

Victory Without Wings

HELICOPTERS PLANNED FOR THE FUTURE



Cutaway of a Coaxial Cargo Carrier



The Helidyne Convertiplane

ing cargo, mail and passengers, from the inventors of the helicopter to those who have put the helicopter to use, to those who are still developing the helicopter for greater utility, range and economy of service. At present, the line of development seems to be running logically toward larger "egg-beaters," with greater emphasis given to speed. At present also, the operating cost of the helicopter is about 25% higher than that of the two fixed-wing type. However, this percentage will undoubtedly be reduced as experience is gained in both manufacturing and operation.

While drawing boards are studded with double decked or underslung or jet propelled variations, helicopters are being put to use in a variety of practical ways. A billboard flown to an inaccessible knoll in New Jersey, evacuation of troops (about 750 per month) in Korea, power line patrol, cargo and mail flown from airports lying far in the outskirts of a big city, all these typify the peculiar usefulness of aircraft without wings. So does survey work.

On May 31, 1951, the first routine helicopter flight was made from the rooftop of the Port of New York Authority building by a Bell 47D1 heli-

copter. Resembling a mosquito from the ground, the craft can now be seen generally flying around the tip of lower Manhattan and also at the major airports—Idlewild, LaGuardia, Teterboro and Newark—for which the Port Authority is responsible. The use of the helicopter has been to expedite travel between these points and to condense a two-day inspection tour of ground transportation to a three-hour trip.

The Time Element

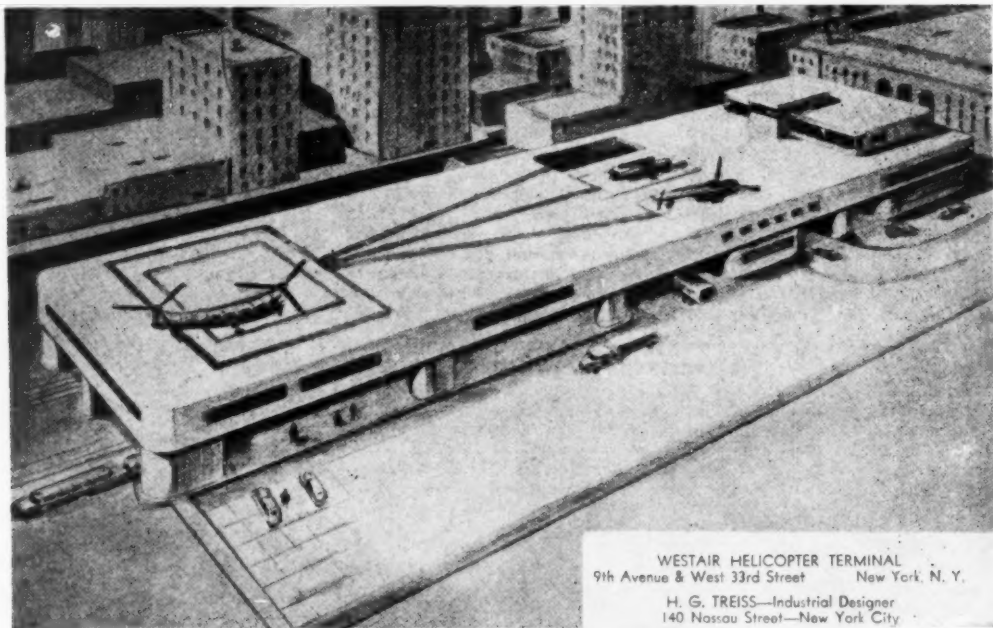
Time saving is, of course, the helicopter's greatest asset. Although airfreight moves faster now than at any other time, there is still a considerable delay when surface transportation takes over. Now helicopters can do the job that trucks have been doing, but do it often in half the time formerly consumed. For instance, the ground trip from Newark Airport to midtown Manhattan takes roughly 20 minutes longer than the entire plane trip from Washington, D. C., to Newark. Substituting helicopter for taxi, the surface trip is reduced to nine minutes. According to the Port of New York Authority, travel time between midtown Manhattan and any of the four surrounding airports has decreased as much as 76% because

of the helicopter.

As helicopters increasingly fill the sky, heliports will have to be built. While the roof of the Port Authority building is used as a landing site for the Bell 47D1, and an alternate site has been leased near Gouverneur Slip on the East River for use when bad weather prevents rooftop landings, eventually the need for a regular heliport in Manhattan will become apparent. As far back as 1945, John F. Budd, editor and publisher of *AIR TRANSPORTATION*, advocated the erection of a heliport within Manhattan. Because his remarks and observations are as pertinent today as they were when he first made them, most of them are reprinted here from the article that had appeared in the October, 1945, edition of this magazine.

"John F. Budd, who for years has been clamoring that air transportation begins in the city and terminates in the city, has popped up with a plan for a helicopter terminal for New York City, which would cut drastically the transportation time to and from the heart of the traffic-congested city and the airports in the metropolitan area, and also to bring all air mail to the very doorstep of the General Post Office.

(Continued on Page 32)



WESTAIR HELICOPTER TERMINAL
9th Avenue & West 33rd Street New York, N. Y.
H. G. TREISS—Industrial Designer
140 Nassau Street—New York City

This is an artist's conception of Westair, the heliport proposed by John F. Budd, editor and publisher of *AIR TRANSPORTATION*, to be used as a helicopter terminal within New York City. Although suggested by Budd as far back as 1945, the idea is still sound and practicable. With helicopter service due to start soon in New York, the need for a heliport such as this will be increasingly felt by city officials.



FREIGHT TAKES TO THE AIR



A TRANSATLANTIC PASSENGER PLANE departs ceremoniously. Passengers file up the gangway into the luxuriously fitted cabin. Smartly uniformed attendants hustle about. People look at their watches. Friends wave from behind the terminal gates as the airliner's engines begin to turn over.

The ocean freight plane, on the other hand, comes and goes without ceremony, seldom noticed except by those who have business with it. A tramp steamer of the air, it flies when and where there is cargo to be carried.

What kind of freight is so urgent that a crew of six skilled men and a half a million dollars' worth of flying machine can be employed to move a few tons of it from here to there?

Actually, much air freight is quite ordinary merchandise, stuff you might find in any cargo truck, boxcar or ship's hold. To someone, however, the delivery of these goods across an ocean in a couple of days, instead of a couple of weeks, is worth something extra in freight charges.

Take a look at an air freight manifest.

One day recently, a Douglas DC-4 Airtreader of Seaboard & Western Airlines flew from New York to Frankfurt, Germany, with seven tons of cargo.

The two heaviest consignments, about

two tons each, were blasting caps (ultimate destination: a mine in northern Rhodesia) and women's dresses (for a Brussels department store). For Brussels there were also shipments of raw furs, sun glasses and air compressor parts. For Paris there were rubber tires, spare airplane parts and samples of motor gasoline. For Geneva, an airplane engine and some sound recording tape. For Zurich, dress snap fasteners and an office intercom system. For Stuttgart, wool sweaters. For Milan, radio tubes. For a jeweler in Frankfurt, five small boxes, weighing 218 pounds of 22 carat gold. There were also 1,082 pounds of dried human blood plasma for the Directorate of Civil Medical Stores in Baghdad, Iraq.

This flight reached Frankfurt in a little less than twenty-three hours. The cargo was unloaded, and the crew went off for three days' rest. The airplane, however, had exactly three and a half hours' rest. Then, with a fresh crew, it headed back for New York. (A freight airplane on the ground is like a hole in the pocket.)

The westbound manifest listed a payload of some six and one-half tons; a ton and a half of original oil paintings; more than a ton of optical lenses; half a ton of carbon resistors; another half ton of cameras and accessories; plus costume jewelry, watches, straw braid, and a horse.

Emergencies of various kinds lie behind many consignments of air freight. Ship-owners, for instance, fly spare parts to vessels which have broken down in foreign ports. They use the air

as a matter of course, because it may cost thousands of dollars a day to keep a ship idle.

When cholera broke out in the Middle East, late in 1947, the endangered countries appealed to the U.N.'s World Health Organization for help. The W.H.O. asked Seaboard & Western if it could fly out U. S. supplies of vaccine. Eighteen hours after it got its first phone call, Seaboard had a plane load of vaccine headed east.

In 1948, Standard-Vacuum Oil Company was working on an urgent schedule to get its big refinery at Palembang, Indonesia, idle since Japanese occupation, back into production. But six tons of critically needed equipment were delayed in the United States when they should already have been in Sumatra. Seaboard & Western flew the load out; it was less than a week between factory and refinery.

Still, the bread and butter of the air freight lines is not earned from emergencies. It is paid for by shippers who use the air regularly because it is profitable for them to do so.

Textile markets, for example, are subject to sudden price fluctuations and style changes. But a clothing importer who ships by air can bring his goods in almost overnight when the market is favorable, and realize on his investment in a matter of days instead of weeks or months. Today textiles woven in Italian mills are being flown to New York and delivered to cutting rooms in Pennsylvania factories within twenty-four hours.

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EDITOR'S NOTE: Air cargo is growing all the time, and industry is greatly impressed with it. As proof of this, AIR TRANSPORTATION received special permission to reprint this article from the Standard Oil Company's publication, The Lamp.

WE FLY FLAVOR

By E. K. EDIE

Traffic Department, Magnus, Mabée & Reynard, Inc.

MEN, SEEMINGLY, have always been engaged in the buying, selling and transporting of merchandise.

Elapsed delivery time, whether measured in hours, days or weeks, has ever constituted a grand challenge.

Just as Yankee Clippers, steamships and mile-a-minute freight trains revolutionized domestic and international trade, so is another transportation transformation in process today. For several years now the Freighters of the Sky have been proving to industry the world over that here is the most facile means of transportation yet evolved that may be depended upon to shorten transit time.

Nowhere, perhaps, in the eastern United States can one get a better first hand glimpse of so many different kinds of freight transportation as during a trip from New York to Albany.

There, steaming up the Hudson River is a sleek freighter, carrying lumber from Norway, almost at her journey's end—the piers of the Port of Albany; and at a more sedate speed, a convoy of barges, reminding of the mule-drawn canal boats of the old Erie Canal prior to 1910, getting a tow to Buffalo. That single motorized barge is Montreal bound. It will make that run in about three days and will traverse three rivers—the Hudson, the Richelieu and the St. Lawrence—with the full length of Lake Champlain thrown in, the transition from river to lake made possible by canals built years ago. And on steel rails, hugging the Hudson's east bank, the crack Pacemaker slides by, a solid train of gray and red freight cars, moving at express speed towards Chicago 1,000 miles away, in active competition with almost equally fast motor trucks, some with Pacific Coast destinations; and overhead a succession of planes with their cargoes of humans and goods of all kinds.

Here is visible proof that with each invention and improvement in transportation service, older methods become selective, and are continued on in the supplemental capacity best suited to the needs of present day buyers and sellers.

Generally speaking, the more costly the goods are in transit, the more apparent are the benefits derived from airfreight service.

For a great many years, Magnus, Mabée & Reynard, Inc., has been a supplier of essential oils—liquids obtained by steam distillation of the buds, berries, barks, seeds, leaves and roots of the hundreds of plants used by mankind throughout the ages for flavoring and aromatizing purposes, liquids which contain all the active flavor and odor characteristics of the raw material.

Then and Now

Camel trains stretched out in an almost endless chain over the plateaus and deserts of the Orient, bearing the spices and perfumes of Asia, India and the Asiatic islands, dating back to almost 3000 B.C., constituted the first foundation of international commerce. These same materials, supplemented by the more recent contributions of Mexico, the West Indies, Central and South America, continue to play an important role in present-day commerce. They are as fully recognized today as in the past in the preparation of our daily food and in the manufacture of perfume compounds, drugs, pharmaceuticals, insecticides, soaps, beverages, candles, incense, glue and other products produced by more than half a hundred different lines of industry. And they come not by camel, but by airfreight.

The housewife who nonchalantly tosses into her trundled wire basket a package of cloves from Madagascar or Penang, a tin of cinnamon from Ceylon, of a few ounces of allspice from British Jamaica, would find no use for their liquid counterparts in her kitchen; the concentration being too great to warrant application under the dosage facilities of the average household. (One pound of essential oil of allspice, for instance, being the equivalent in flavor value of about 30 pounds of the packaged spice.)

Commercial manufacturers, however, find the concentrated oils of advantage

in achieving better, more uniform flavoring and seasoning, and with the development of mass production in food processing, the essential oils have substantially replaced the crude material.

Mother Nature has been exceedingly kind to the U. S. in many ways, but for all her generosity, or for climatic reasons, she has overlooked us in the case of most of the essential oils or their source material. Transportation, therefore, continues to be a vital matter. The essential oils, or if stills are not available at point of origin, the raw materials must be transported by water or air, destination point New York City, the chief point of supply for not only our own country but for much of the world outside the iron curtain.

Manufacturers and suppliers of essential oils are perhaps unusually interested in transportation. They find it necessary to use all available types of transportation for both incoming and outgoing shipments.

In recent years our use of airfreight has shown marked increases. Domestically, this was fostered substantially by a folder which we issued for the benefit of our customers, setting forth comparative rates and delivery time to most of the important points of the United States.

Value of Air Cargo

The greatest savings in transit time, naturally, result from flying overseas cargoes. Magnus, Mabée & Reynard ships its products to every country and receives goods from every country, on rare occasions to and from some of them located behind the iron curtain. Highly valuable coriander oil, for example, is produced in Russia, Yugoslavia and south central Europe. Coriander oil is used principally in food seasoning, being especially desirable in the manufacture of whole beef frankfurters.

Precious oil, particularly those used in compounding perfumes, don't need volume to make up a valuable shipment. Sometimes only 20 pounds will be very valuable. Because they are precious, we at Magnus, Mabée & Reynard always feel easier when transit time is cut down and we know that the cargo is in our hands or already being processed into perfumes. Needless to say, air transportation cuts our anxieties down to an absolute minimum.

In every manufacturer's life there comes times when supplies need replenishment in a hurry. That is when he takes to the air. He knows that in 24 to 48 hours, depending on distance, the urgently needed material will arrive safely in his plant.

(Continued on Page 27)

FLY
YOUR
SHIPMENTS



EXPAND
YOUR
MARKET

(REG. U. S. PAT. OFF.)

VOL. 20

FEBRUARY, 1952

NO. 2

S&W BUYS SUPER CONNIES

Yule Rush Flown by TWA

NEW YORK—Approximately a ton of cargo over the normal volume was air-shipped during the latter part of November due to Christmas, according to E. O. Cocke, vice president-sales for Trans World Airlines. This increased volume, considered Yuletide excess, contained mail mostly as well as a considerable quantity of gifts. From Europe have come toys of every description; delicate watches and watch parts from Switzerland have also figured prominently in these air shipments via TWA.

Post Office officials feel that the build-up of our armies in Europe was responsible for this unusually heavy load of international Christmas mail. Ordinarily, the Christmas cargo rush does not build up until early December. In 1951, the build up started in advance of that month.

AT Editor Wins TWA Award For His "Boxcars In The Sky"

For the second consecutive year, Richard Malkin has won first prize in TWA's annual Aviation Writing Competition. Malkin, who currently serves as consulting editor to *Air Transportation*, won the coveted aviation literature award for his recently published book, *Boxcars in the Sky* (Import Publications).

Besides the distinction of having produced the best operation and development story in the contest's Technical Division, Malkin will receive a cash award, an engraved plaque, and a vacation in Arizona. Last year he won similar first-place awards for his series of on-the-spot articles on the Berlin Airlift, published in *Air Transportation*.

Boxcars in the Sky is widely recognized as the first book-length story of air freight ever to be published. Eminently suited for this job because of his top-ranking position in this phase of aviation journalism, Malkin elected to write his book in easy-flowing non-technical language so that the layman could receive, for the first time, a highly specialized subject he could understand and enjoy at the same time. The author previously had distinguished himself by writing the first air freight traffic book, *Air Freight Transportation* (La Salle Extension University); but the styles of both books are distinctly different. Where *Air Freight Transportation* is strictly a text book, the prize-winning *Boxcars in the Sky* at times reads almost like a novel.

Critical acclaim was instantaneous.

TCA Flies Diamond Sleuth

TANGANYIKA, BRITISH EAST AFRICA—Thefts of diamonds from the mines are thwarted now that a mechanical gem sleuth has been invented and flown from Canada to this area. From the engineering concern of Kipp-Kelly in Winnipeg has come a working model of a machine that separates the diamonds from the rocks in which they are imbedded, reducing thievery among the natives used to hand-pick the diamonds from the rocks. While actual details concerning the diamond sleuth were not disclosed, the prototype was listed as "a small scale earth screening machine" that had been developed and rushed to Africa for trial.

With the success of this machine, Trans-Canada Air Lines has been airlifting a sizeable order of this type of equipment via London here. Officials claim the new machine will revolutionize diamond mining methods.

Present Freight Capacity Will Be Almost Doubled When New Planes Arrive

NEW YORK—From Seaboard & Western Airlines has come word of the purchase of five Lockheed Super Constellations to augment this all-freight carrier's fleet. Cost for the freight additions came to \$10,000,000. According to Robert E. Gross, president of Lockheed, "This marks the first purchase by a commercial airline of new, long-range, all-freight aircraft for over-ocean operation."

As Fast As Passenger Planes

This airship is the freighter version of Lockheed's popular Super Constellation, with cruising speed that ranges from 300 to 336 miles per hour. "These airplanes," said Raymond A. Norden, president of S&W, "will lift more tonnage, faster and over greater distance than any other commercial aircraft now flying or in production." The Super Connie freighter, when delivered, will lift 36,000 pounds of freight over S&W's critical 2,000 mile leg of the North Atlantic between Gander, Newfoundland and Shannon, Ireland.

Greater Lift-ability

The five new airplanes, each operated an average of 10 hours daily, are expected to give S&W an annual long-range airlift capacity of 98,500,000 ton miles, according to Norden. In contrast with this, Seaboard's current fleet of seven DC-4s, now operating at an average of 14 hours daily, has a maximum annual long-range airlift capacity of 53,600,000 ton miles.

To facilitate storage of heavy cargo, an electric-powered conveyor chain is built into the magnesium floor of the cargo cabin. These floors, which are water-tight, permit a load capacity of 300 pounds per square foot.

Purchase of this aircraft by an all-freight carrier the size of Seaboard & Western, said Lockheed's Gross, "marks a high point in the history of aviation. Its utilization, over the North Atlantic will have considerable influence on the future of aircraft manufacturing and international trade."

Pointing out that journalists are always accused of superficiality, *Interavia*, the important international magazine published in Switzerland in four languages, said: "How unmerited such an accusation may be is amply proved by the American journalist, Richard Malkin." *Aviation Week* called it "a comprehensive and thoroughly documented story of the air cargo business—civil and military." The authoritative British weekly magazine, *The Aeroplane*, stated that Malkin's "journalistic skill ensures that his enthusiasm has every chance of being passed on to his readers." It called the book "stimulating" and recommended it to "all interested in the transportation of goods, and particularly to those in aviation who think that it is only passengers that matter."

(Concluded on Page 13)

Loadair Demonstration Held in South America Proves Very Successful

BARRANQUILLA, COLOMBIA—Whiting Loadair, an automatic device for parking aircraft immediately adjacent to an airport terminal in order to speed ground movement of passengers and air cargo, as well as plane service, has been successfully demonstrated here by Whiting Corporation, the Harvey, Illinois, manufacturing firm responsible for its development. Attending the demonstration were local government and business officials, plus representatives of major airlines, aircraft manufacturers and airports, and members of the U. S. Civil Aeronautics Authority.

Avianca, was the first airline to take advantage of the benefits Loadair offers, having placed it in test operation approximately three months ago. Those attending the demonstration were told by officials of Avianca that it had reduced ramp time by at least 50%. Loadair consists of three cars which are virtually flush with the airport pavement, and travel on rails from the taxi strip to the terminal building. The aircraft is taxied onto these cars and mechanically locked in place. Push button operation moves the cars thus bearing the aircraft sideways until it is flush against the terminal. Both passengers and cargo are unloaded directly into the building. Plane servicing operations may also be handled from fixed units in the terminal to eliminate much portable equipment.

Conventional vs. Loadair System

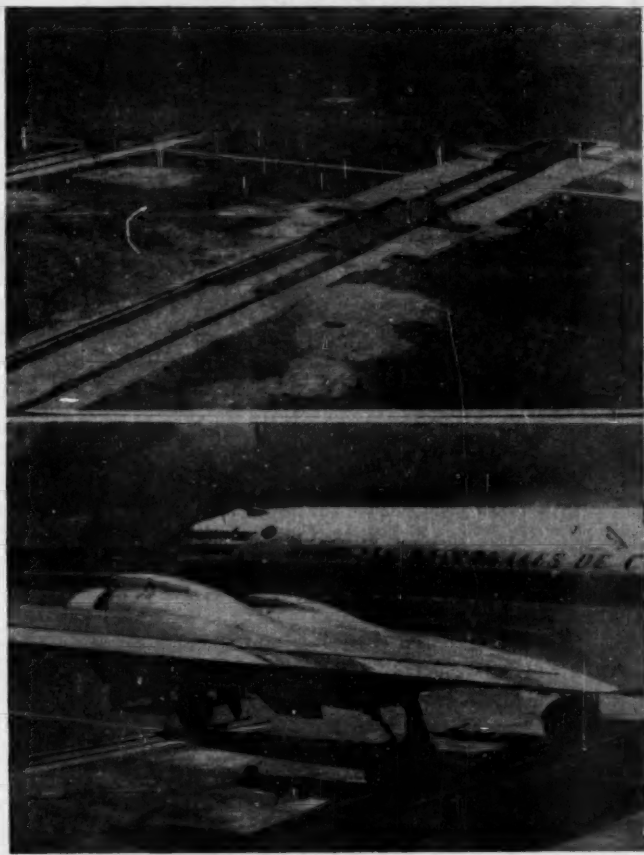
With conventional systems of aircraft parking, there are numerous collision hazards, not only from other aircraft, but also from trucks and portable ramp equipment. Ramp space is wasted to permit margins for the maneuvering of air craft at the terminal. With Loadair, however, mechanical positioning of aircraft and automatic controls eliminate collision hazards. 20 to 25% more aircraft can be parked in front of a given terminal and these aircraft spend 50% less time at the terminal. Thus, airport terminal utilization is better than doubled!

Stevens H. Hammond, Chairman of the Board of Whiting Corporation, who was in charge of the demonstration, emphasized that Loadair offers both airlines and airports a completely new opportunity to reduce expenditures and improve operation as well as service in connection with both passengers and cargo.

Loadair, he said, can be used to expand the utilization and effectiveness of existing terminals. With airports, it permits appreciable savings in building and pavement costs. He estimated that such increased utilization or cost savings should more than offset the capital expenditure required for the equipment. From the airlines' point of view, Hammond pointed out, additional savings may be achieved through faster, more efficient loading and servicing of planes. He also stated that automatic movement of the airplane reduces possible damage to the airplane while taxiing, or through being bumped by mobile equipment while parked.

With Loadair, cargo handling is speeded up while affording greater safety for fragile merchandise, baggage or mail. Fewer personnel are needed for loading, unloading and servicing operations.

Loadair Ready for Operation



SAS Flies Art Treasures

PARIS—A consignment of oil paintings handled by Goudrand Brothers, air freight forwarders, and flown by Scandinavian Airlines System, safely reached here after a flight of less than 24 hours. The art masterpieces, weighing altogether slightly over 630 pounds, were carefully crated in five boxes. The value of the shipment was given at \$115,000.

In handling this precious cargo, SAS used a DC-4 to air lift it to Copenhagen and from there to Paris used a DC-6. The paintings were offloaded and uncanted and ready for exhibition in only a short while.

Second Car Ferry to Start

SOUTHAMPTON—With the increasing success of the air ferry service, from this city to Cherbourg, France, another cross-Channel service is soon to be started. Silver City Airways, with whom the idea originated, will also inaugurate the new service, again using Bristol Freighters for ferrying. The new route will be flown from Eastleigh airbase here to Maupertuis air-drome, Cherbourg.

All-Cargo Flights Resumed

NEW YORK—Due to the huge increase of airgoing cargo in general and of transatlantic air cargo in particular, Pan American World Airways has resumed its all-cargo flights over the Atlantic. Formerly, Pan Am's all-cargo service over the Atlantic was suspended due to the war needs in Korea. But with the need for airfreight transportation growing more acute over this area, Pan Am has rented a DC-6A from Slick Airways in order to reinstate this service.

These all-cargo flights now leave New York every Saturday, and the westbound flights leave London the following day. Bulky cargo moving to other European destinations are now transferred to this carrier's all-cargo DC-6As. According to Willis G. Lipscomb, vice president, traffic and sales of the airline, this service, resumed after a year and a half's interruption, gives shippers on both sides of the Atlantic the advantage of a Monday morning delivery. The DC-6A, with its pressurized cabin, is considered ideal for the airshipping of perishables and animals at high altitudes.

All-Cargo Flights from Manila Speed Up Taipeh-Bound Freight

TAIPEH, FORMOSA—In response to the many needs of business firms throughout the United States for further cargo service to this island, Philippine Air Lines now offers what it refers to as "the fastest cargo service between San Francisco and Taipeh." This service has been instituted in connection with increasing business activities here which demand increased cargo flights.

According to PAL's plan, cargo winging its way from San Francisco stops first for transfer at Manila from which point it is flown up on a scheduled all-cargo flight every Friday. The delay due to the stop-over is never more than two hours, however, thanks to skillful planning and a weekly Manila-Taipeh cargo-passenger flight which augments the other every Tuesday afternoon.

While this service is carried in PAL's DC-6s, the airline has announced the order of a fourth Convair Liner 340 to its growing fleet. The announcement came from the airline's president, Col. Andres Soriano, who added that the aircraft, ordered for delivery early in 1953, will be incorporated into PAL's inter-island service and Far East regional operations, for which they are "exceptionally suited."

PAL is listed as one of the nine major carriers who have ordered the 340. The new equipment represents an investment of \$2,200,000, in addition to which PAL has also ordered several DC-6Bs. These purchases obviously indicate optimism about the future of air transportation in the Far East.

Gill Robb Wilson Foresees Big Future for Air Cargo

NEW YORK—One of the most astute and able writers on aviation matters, Gill Robb Wilson, recently went on record to state that air cargo will be the big news of 1952. Observing that our major air-freight carriers, Slick, Flying Tiger, Seaboard and Western have all placed orders for the biggest and fastest planes they can get for flying cargo, Wilson foresaw that air cargo "is following the pattern of all other forms of transportation and ultimately all air lines will be making their major profits from freight."

Concerning other aspects of the aviation industry, Wilson noted that private flying will move over into the field of utility, with salesmanship, farm utility and executive travel making increased use of personal planes. With three metropolitan centers certificated for commercial helicopter service, Wilson stated that Baltimore, Miami, Washington, D. C., Cleveland and Philadelphia may in 1952 make application for similar service, although military procurement may hinder this development.

"The approaching year will bring rough sledding to the aircraft industry," noted Wilson. The big job, of course, will be in accommodating an unparalleled volume of business. The industry will have to increase production but "in competition with the civilian economy and simultaneously in bearing the burden of moves toward nationalization of plane production."

Conclusions drawn from the above statements are simply these: that military and civil leaders both have come to realize that

they must look to the air in order to achieve their various ends, that helicopters will loom larger and more important in the air world, and that with an unprecedented volume of business falling to the airlines, air cargo transportation will eventually lead the field.

Air Express Gains Listed

NEW YORK—According to the Air Express Division of Railway Express Agency, the average weight of air express shipments has grown within 10 years—1941 to 1951—from 8.6 pounds to 27 pounds per shipment. With air cargo becoming more firmly entrenched in the minds of the nation's shippers, REA expects the weight of air express shipments handled in the United States during 1951 to exceed 116 million pounds, or 159 tons of air express per day.

AWARD FOR 'BOXCARS'

(Continued from Page 11)

Another highly respected British periodical, *Flight*, wrote that "Boxcars in the Sky is still the most interesting and factually complete book on the subject of air freighting that has yet appeared." *The Journal of Air Law and Commerce* lauded Malkin for furthering knowledge on the subject "in a practically painless manner, thanks to the fluid journalistic style of the author." *The Booklist*, which is published by the American Library Association, called the story "an interesting one and deserves telling," which was "written in the terse style of a newspaperman, with all the adventure and excitement of a novel."

Richard Malkin joined AIR TRANSPORTATION in 1944, when the world was still at war, and the nonakeds, helicopter airlines, and air freight forwarders were not in existence. He developed a national reputation as the leading authoritative journalist on the subject of air freight. Paradoxically, Malkin also is a successful fiction writer, having won the successful O. Henry Short Story Award in 1948. In that same year his name was included in the Honor Roll of Most Distinctive Short Story Authors, compiled by the famous anthologist, Marjorie Fole. One of his stories has been scripted for the movies.



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Cargo Totals Listed for LAN

From Chile's pioneer airline, Linea Aerea Nacional, have come these figures as proof that air cargo transportation is rapidly growing in wherever it has taken root. While these figures are all in kilometers, it doesn't take a mathematician to realize that airfreight is climbing steadily. The figures themselves tell the story.

	Freight, kilometers			Mail, kilometers		
	Domestic	International	Total	Domestic	International	Total
1940.....	15,893	.....	15,893	7,552	.....	7,552
1941.....	29,710	.....	29,710	9,365	.....	9,365
1942.....	37,055	.....	37,055	11,895	.....	11,895
1943.....	47,134	.....	47,134	14,214	.....	14,214
1944.....	58,689	.....	58,689	16,772	.....	16,772
1945.....	123,818	.....	123,818	19,134	.....	19,134
1946.....	297,282	94	297,376	28,882	37	28,919
1947.....	564,976	7,259	572,235	37,418	2,222	39,640
1948.....	780,020	21,122	801,142	42,056	4,030	46,086
1949.....	729,856	8,842	738,698	44,158	3,105	47,263
1950.....	675,108	73,894	749,002	49,247	8,278	57,525

TAL Opens Branch Office

OAKLAND—Transocean Air Lines has opened a sales office and warehouse for its Talchem division in order to better serve the Pacific Northwest and Alaska. Talchem, located at Boeing Field, Seattle, the new office and warehouse will be managed by J. Stan Barlow, former Boeing test pilot. Talchem is a world wide unit belonging to Transocean that distributes chemicals.

Tobacco Flown to Kingston

MIAMI—Cargo Clippers belonging to Pan American World Airways are currently engaged in flying leaf tobacco from Havana to Kingston for processing. The first shipment of 4,732 pounds of this tobacco was valued at \$6,245. Several other large shipments are also on their way to relieve the current cigar and cigarette shortage in the British colony.

AIR FREIGHT FORWARDERS

AIR EXPRESS DIVISION of the Railway Express Agency has set during the month of October a new record in air express flown in and out of the New York metropolitan area. All of 110,930 air express shipments were handled through Idlewild, LaGuardia and Newark Airports during the month, an increase in shipments of 45.6 percent over the same month in the previous year. In dollars and cents, the shipments came to \$682,695, or a gain of 102.8 percent. For the full 10 months of 1951, the company handled 1,001,273 shipments, 9.2 percent more than the comparable previous period, which brought in a gross revenue increase of 60 percent over the same previous period. Nationwide air express shipments rose correspondingly, with the 10 month total for 1950 listed at 17 million dollars and the 10 month total for 1951 listed at \$25,194,160.

Air Express International Agency, Inc., announced the appointment of William R. Garcia as export supervisor in the Los Angeles district office. Formerly a partner in International Air Cargo Express in Los Angeles, Garcia therefore brings considerable experience to his new assignment. This appointment, stated AEA vice president, Alvin B. Beck, is one of several recently made, corresponding with this agency's line of program expansion.

4

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PAGE 14—AIR TRANSPORTATION—Air Commerce



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RAPID TRANS-SHIPMENT—Direct service to principal cities around 3/4 of the world plus joint cargo rates with other major airlines provide prompt, dependable trans-shipment to all points in the Orient, Australia, India, the Middle East and Europe.

AA and Douglas Make DC-7 Plane Won't Fly Till '54

NEW YORK—From both the Douglas Aircraft Company and American Airlines has come the announcement of a new airplane designed to exceed in speed the fastest plane now in airline service. To be called the Douglas DC-7, the new craft will be all of 40 inches longer than the DC-6B, and will fly 50 miles faster. It will be powered by four Wright Turbo Compound engines and several other mechanical innovations that will allow for increased horsepower and high fuel economy.

With this announcement has come the fact that American Airlines has ordered 25 of the new planes, which will cost approximately \$1,590,000 each. The planes, however, will not be delivered until late in 1953, and therefore will not be seen in service until January 1, 1954. Also on order from American are 11 aircraft of the DC-6A and DC-6B types, which will be delivered early in 1953.

Commenting on the DC-7, C. R. Smith, president of the airline, said, "The high speed and the long cruising range of the DC-7 will make it the most modern of the United States transport airplanes . . . It will provide faster schedules . . . and will be a substantial addition to national airpower."

UAL Starts New Service

CHICAGO—For the better protection of airfreighted perishables, United Air Lines has started a new service designed to aid fruit and flower growers. When freezing weather is expected at major receiving points along UAL's 13,250-mile system, an alert is wired to UAL's airfreight agents, who in turn warn shippers that extra insulation and other means of protection are needed. Thus if temperatures at New York City drop to the low points, an 18 hour forecast for New York is wired to Oakland, San Francisco, Burbank and Los Angeles so that suitable preparation may be made.

Comparison of the DC-6B and the DC-7

	DC-6B	DC-7
Manufacturer	Douglas	Douglas
Length	105 ft. 7 in.	108 ft. 11 in.
Speed (cruising)	313 mph	363 mph
Seats	52—6 in rear lounge	60 passenger—6/95 coach
Engines	4 Pratt & Whitney 2400 H.P.	4 Wright Turbo Compound 3250 H.P.
Wing Span	117 ft. 6 in.	117 ft. 6 in.
Maximum takeoff weight	100,000 pounds	116,800 pounds

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Dear Mr. Budd

I must apologize for the delay in pub-

lishing the . . . review of Richard Malkin's **BOXCARS IN THE SKY**, . . .

My review appeared in the 2nd November issue of **FLIGHT**, our leading British Air Journal, and will, I hope, help to bring this interesting book to the attention of the many readers over here who would find it informative and helpful.

Yours sincerely,
John W. R. Taylor

Air France to Buy Comets

PARIS—Word has come through that Air France intends to purchase three Series 1 Comets from the de Havilland Aircraft Company. An agreement in principle to purchase these aircraft has been signed, but it is still subject to the formalities of approval by the French Government.

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- 8 Bulletin 5191, illustrates and briefly describes the principal units in an

expanded line of industrial trucks and tractors. The complete line is graphically presented in this attractive, four-page folder.

9 Here's a handy gadget being distributed by a prominent freight forwarding firm. It's a combination key ring and auto license holder which fits neatly into your pocket.

10 Both entertaining and educational, a 20-minute color and sound film is available to clubs, schools, business groups and television stations. It shows how business airplanes help industrial leaders save time. Highly informative.

11 A new eight-page specification booklet listing the advantages of the new fork lift trucks. Dimension drawings show their maneuverability, detailed specifications allow comparisons with other trucks. Complete in every detail.

12 *How To Help Your Post Office Help You*, a new booklet, copiously illustrated and designed to help accelerate postal service whenever necessary. It will prove timely and valuable to parcel post shippers as well as to users of regular letter mail.

13 For those whose trucks are a vital part of their business, a new, large, 16-page booklet is ready to help keep them rolling. Fifty-one illustrations with explanatory text will show you how to prevent truck failures and save on overhaul expenses.

14 Literature describing a new-type gummed tape dispenser which is operated like a telephone dial, measuring and cutting the tape accurately while moistening it.

16 *Units of Weight and Measure, Definitions, and Tables of Equivalents*—a valuable 68-page book for all shippers. Handsomely put up with leatherette cover.

18 An attractive and valuable wall chart in color, showing the proper procedures in storing gummed tape, the use of automatic dispensers, and the application of gummed tape. Should be on the walls of all shipping departments. Illustrations tell the story in a glance.

19 Complete information concerning five new fork lift trucks is now available for all shippers interested in improving their line of trucks with an eye toward speed, efficiency and maneuverability.

20 A complete directory of all Railway Express Agency offices which provide air express service. Offices are listed alphabetically to facilitate detection.

21 If you're a shipper you'll like this gadget. It's a dial-type estimator which places air express rates at your fingertips. How many does your office require?

22 General information and air freight rates of British Overseas Airways Corporation. Includes such information as charges for Customs clearance formalities in the United Kingdom, transshipment charges, prohibited articles, etc.

23 1951-52 edition of the *Missouri Airport Directory*. Contains an aerial photograph of every airport in the state

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24 A job study showing how an Albany manufacturer of cleaning products increased plant capacity 400% with a carefully planned integrated handling system.

25 *Off the Cuff*, an informational magazine produced by a leading manufacturer of materials handling equipment. Well illustrated.

26 Descriptive brochure on the brand new book, *Boxcars in the Sky*, which tells the thrilling story of commercial and military air cargo, from A to Z. This volume is the first of its kind published anywhere.

27 *Travelers' Facts About South America*—for the green visitor to the southern continent who requires all types of information concerning the various countries and how to prepare for his trip. The business air traveler will find this 28-page booklet valuable.

28 *Your Foreign Shipping Handbook*, a descriptive booklet, in color, issued by the Foreign Traffic Department of American Express. Introduces in graphic form the various services of the company's international shipping setup.

30 *Gourmet Guide to Good Living in South America*—a 55-page booklet which presents the business air traveler with all the necessary know-how relating to foods, restaurants, hotels, clubs, etc.

31 *What to Expect from Wirebound's*—an attractive booklet which presents the construction principles of wire-bound boxes and crates. Includes 24 case studies.

32 *The Picture Book for Parcel Post Shippers*—an illustrated booklet explaining economics in metered parcels.

33 TWA's *Air Freight Fact File*, which includes route map, air freight office phones, rates, etc.

34 Consular Documentary Requirements and Charges, as prepared by one of the leading air freight forwarding firms. Valuable for international shippers.

35 Latest issue of *Industrial Review* which highlights the advantages gained through the use of a certain specialized packing tape.

36 Latest issue of a valuable magazine which includes many useful tips on the use of steel strapping in packaging shipments. Well illustrated.

37 A chart showing step-by-step instructions for sealing Vs and W cartons with tape to meet Government specifications. Ten steps are depicted. Includes sealing a carton's innerliner and outer seams, and covering and protecting carton labels. A handy reference.

39 *Peggy and Mado*, an unusual comic-type booklet which does a terrific job explaining how a four-week vacation can be spent in France.

National Packaging Exposition Will Be Bigger Show This Year

ATLANTIC CITY—Inclusive from April 1 to 4, the 21st National Packaging Exposition will be held at the Atlantic City Auditorium here. According to members of the American Management Association, the exposition is expected to be "the greatest presentation in the two decades of the event." Held concurrently with the exposition will be the Conference on Packaging, Packing and Shipping. For the first time in its history, the affair will occupy both levels of the huge auditorium.

In only six weeks after official floor plans were issued, the exhibit area was reserved by 271 exhibitors, who in turn required almost 20 percent additional area than had been used in the 1951 exposition. Featured in the exposition will be the latest developments in machines, equipment, materials and services for packing, packaging and shipping. Materials handling equipment, which generally had been too heavy to display actively due to severely limited floor load factors on the Boardwalk level of the Auditorium, will now be demonstrated on the lower level, with its almost unlimited floor load.

Among those actively engaged in preparing the exposition are representatives from American Viscose Corp., General Box Company, The Dow Chemical Company, Peters Machinery Corp., Anaconda Copper Mining Company, The Coca-Cola Company, and many others.

read

BOXCARS IN THE SKY

41 Latest issue of *Handling Materials Illustrated* which offers actual case histories to those who are engaged in the handling of various types of shipments.

43 Here's the very latest issue of the New York State Airport Map and Directory. This is a revision of the last map offered in these columns.

44 Just about everything the air-freight shipper has to know about tariffs. This new, revised list is designed to simplify the finding of facts necessary for shipping. Approved by the CAB.

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Mr. A. Tee Presents FACTS and FIGURES

ALL-AMERICAN AIRWAYS: In its mail and express categories, this carrier boasts of impressive increases for the first 10 months of 1951. Mail jumped from a mere 548,727 pounds carried in 1950 to 738,705 pounds in 1951. Express figures, for the same comparative periods, rose from 1,516,771 pounds to 1,806,368 pounds.

Capital Airlines: For the 10 months ending last October, the recorded net income was \$1,693,362 while the same period in 1950 had brought in only \$1,087,330 net. October's net alone totalled \$245,110, or 32 cents per share.

Mid-Continent Airlines: Statistics for the months of October 1951 and 1950 are as follows: Revenue plane miles flown came to 860,443 as opposed to the previous total of 748,399; mail, express and freight tons airlifted were 370 in contrast to the previous 331; mail, express and freight ton miles flown came to 110,401, a considerable increase over the former figure of 103,132. System operating revenues in total reached an all time high of \$912,918 in October 1951 or 14.78 percent above October 1950.

Northwest Airlines: Freight ton miles

flown in November compared favorably with those of the previous November, the more recent figure reading 1,030,938 as against 1,398,191. Other November operating figures included 153,973 express ton miles flown, somewhat lower than the previous November's, and 339,072 mail revenue ton miles flown, also slightly lower than last November's total of 411,230.

Pan American Grace Airways: All former company records for cargo shipment were broken when Panagra carried 55,869 pounds southbound along the west coast of South America and to Buenos Aires. From January to August of 1951, this carrier had flown 1,651,947 ton miles of cargo, a substantial jump from 1950's eight month period figure of 1,163,575.

Philippine Air Lines: The balance sheet for this carrier, as of October 31, 1951, shows a surplus of \$59,392.09. October earnings brought in a total of \$1,286,435.72, representing PAL's net profit for the first 10 months of that year.

Resort Airlines: A 20 percent dividend on this airline's common stock will be paid to stockholders. This payment equals two cents on the 10 cent par stock, and it represents the firm's first dividend.

Seattle-Tacoma International Airport: Traffic figures during the first 10 months of 1951 show a steady and persistent gain. In and out mail totaled 6,948,995 pounds, a 21 percent increase over 1950. Express for this period came to 2,606,770 pounds, which again represents a 21 percent increase, and freight movements covered 16,473,211 pounds, a 6 percent gain. October freight showed a 28 percent gain over September.

United Air Lines: Record passenger and mail volumes rounded out this line's greatest fall traffic season in its history. United flew 157,750,000 revenue passenger miles in November, and 1,913,000 mail ton miles that same month. Percentage increases for that month over the previous November's were 34 percent and 68 percent respectively. However, for the same comparative months, express ton miles flown went down 27 percent and freight ton miles were off 25 percent.

Korea Wounded Get Gifts

OAKLAND:—For the wounded veterans of Korea have come eight tons of gifts loaded aboard five C-47s of the Naval Air Reserve Command. The gifts, shipped in 250 parcels, each weighing 64 pounds, were the generous offerings of the citizens of Milwaukee, Wisconsin, to the wounded of Korea, many of whom have spent their second Christmas at the front. This shipment also marks the second time that the Naval Air Reserve has helped the American people send Christmas gifts to the men in Korea. The gifts, flown to the Municipal Airport here, were sent to the Fleet Post Office and flown to Korea by the Military Air Transport Service's planes.

BOAC Flies 300 lb. Gift

PITTSBURGH:—From Bangkok, Thailand, by way of London, a 300 pound elephant was flown to New York by British Overseas Airways Corporation. The elephant, only six months old, was housed at the Prospect Park Zoo, in Brooklyn, until shipped here as a surprise gift for a child.

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AFV - Anchorage	MEM - Memphis
BAL - Baltimore	MEX - Mexico City
BOM - Boston, Mass.	MIA - Miami
BOG - Bogot, Col.	MIL - Milwaukee
BOS - Boston	MPS - Minneapolis-St. Paul
BOV - Bozeman, Mont.	MOS - Mobile
BRE - Bremerhaven, Ger.	MT - Montreal
BRS - Charleston, S. C.	MSY - New Orleans
CHI - Chicago	LGA - New York (La Guardia)
CLE - Cleveland	LID - New York (Lidwell)
CMH - Cincinnati, Ohio	
CTB - Cut Bank, Mont.	NYO - Norfolk
DAL - Dallas	RLD - Nuevo Lareda, Mex.
DFW - Dallas-Fort Worth	ONT - Ontario, Calif.
DJP - Detroit	PUK - Paducah, Ky.
DLH - Duluth	PIA - Pinar, Ill.
ELD - El Dorado, Ark.	PHL - Philadelphia
ELP - El Paso	PIB - Pittsburgh
EVV - Evansville, Ind.	PDX - Portland, Or.
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FTY - Fort Lauderdale	QY - Quincy, N. S.
GFK - Grand Forks, N. D.	STL - St. Louis
GNW - Greenwood, Miss.	SLC - Salt Lake City
ORD - Hartford	SAT - San Antonio
HAM - Hampton	SFO - San Francisco
HOT - Hot Springs, Ark.	SEA - Seattle
HOU - Houston	SEV - Seville, Spain
IND - Indianapolis	SFO - Springfield, La.
IND - Indianapolis	QEG - Spokane, Wash.
JAN - Jackson, Miss.	SOF - Springfield, Mo.
JAX - Jacksonville	TUP - Tampa
JFK - New York City, Mass.	TRF - Fort Ruffo, Ind.
KIN - Kingston, Jama.	TOL - Toledo, Ohio
LRO - Los Angeles	TOY - Toronto, Ont.
LIT - Little Rock, Ark.	VAC - Vancouver, B. C.
LAX - Los Angeles	YDG - Yagladon, N. C.

A—American Airlines
AF—Air France
AL—Aerolineas Argentinas
AV—Avianca
B—Braniff International Airways
BC—British Commonwealth Pacific Airlines
BO—British Overseas Airways Corp.
CS—Chicago & Southern Air Lines
C—Colonial Airlines
E—Eastern Air Lines

- EA—Expreso Aéreo Interamericano
- EL—ELAL (Israel Airlines)
- K—KLM Royal Dutch Airlines
- L—Linceo Aereo Mexicano (LAMSA)
- LI—Linceo Aereo Meridionale (Italian Airlines)
- LV—Linceo Aeropostal Venezolana
- N—National Airlines
- NE—Northeast Airlines
- NW—Northwest Airlines
- P—Pan American World Airways and Panagra
- PH—Philippine Air Lines
- R—Riddle Aviation Co.
- S—Sabena Belgian Airlines
- SS—Scandinavian Airlines System
- SW—Seaboard & Western Airlines
- SG—Swairm
- TA—TACA International Air Lines
- T—Trans Canada Air Lines
- TW—Trans World Airlines
- U—United Air Lines
- W—Western Air Lines

COMMODITY RATES: Apply to airlines.

AO: Valuation charge is applicable only on shipments with valuation of over \$7.49 per pound. Minimum charge is as follows:

- E: Valuation charge is applicable only on shipments equal to or more than \$7.49 per pound.
- OF: Valuation charge is applicable only on shipments with a declared valuation in excess of \$7.71 per lb.
- L: Shipments of less than 22 lbs. are sent air express.
- P: Valuation charge is only on shipments with a declared valuation of over \$7.49 per lb.

PM: To any destination in the Philippines served from Manila by PAL (where routing is via PAL from San Francisco) add 10¢ per pound to rates shown as applying to Manila.

SW: Special rates for shipments of 1,000 lbs. and over.

T: More economical rates are offered for bulk cargo. There are three weight categories: 100 lbs. and less, over 25 pounds and 100 pounds, and over 100 pounds. Consult the airline direct.

U: Cheaper "deferred" rates available. Contact airline.

- * This involves onward carriage by another airline.
- ** Per \$107 (Canadian Currency) value, pro-rata.
- † Minimum charge for this shipment is that for 25 lbs.
- ‡ Rate of 25 lbs. or less.
- § Minimum weight 50 lbs.
- || Minimum charge per shipment \$2.00.
- ^^ Minimum charge per shipment \$4.00.
- ^^ Minimum charge per shipment \$8.00.
- ^^ Comair airline for lower rates applicable to 3,000 lbs. and over.
- || Minimum charge per shipment \$5.00.
- d/ Daily freighter service.
- em Trucks to Miami.
- e Canadian Currency.

Destination	Airport and Airline	RATES (See Note)						Day/rt
		1st		2nd		3rd		
		Per 100 lbs	Per 100 lbs	Per 100 lbs	Per 100 lbs	Per 100 lbs	Per 100 lbs	
Acrehio, P. R.....	MIA B	.12	.17	...	...	...	Dly
	LGA BAA	...	...	...	...	...	M, Th
Arequipa, Peru.....	MSP P	1.00	.33	.20	Sa, T, F, Sa			
"	MSY P	1.05	.60	.20	Sa, M, T, F			
"	HOU P	1.09	.63	.20	W, F, Sa			
"	BRO P	1.09	.63	.20	Sa, T, F, Sa			
"	LAX P	1.22	.77	.20	Sa, T, F, Sa			
Arica, Chile.....	MIA P	1.05	.37	.20	T			
"	MSY P	1.09	.63	.20	W, F, Sa			
"	HOU P	1.15	.67	.20	M			
"	BRO P	1.15	.67	.20	M			
"	LAX P	1.26	.81	.20	M			
Armasia, Colombia.	MIA P	1.05	.37	.20	Dly			
"	MSY P	.80	.35	.18	Dly			
"	HOU P	.83	.38	.18	Dly			
"	BRO P	.83	.38	.18	Dly			
"	LAX P	.83	.38	.18	Dly			
"	LGA P	.64	.37	.18	Dly			
"	IDL AV	...	...	...	M, Th, Sa		
"	MIA AV	...	...	...	M, Th		
Aruba, N.W.I.....	MIA K	.30	.25	.19	Dly			
"	UL K	.49	.38	.16	M, F			
Asmara, Eritrea.....	IDL BO	1.85	1.46	.25	Dly			
"	MIA BO	1.85	1.46	.25	Dly			
"	BOS BO	1.92	1.44	.25	Dly			
Asuncion, Paraguay.	LGA P	1.47	.83	.25	M, T, Th			
"	MIA P	1.39	.77	.25	M, Th			
"	MSY P	1.40	.78	.25	W, Sa			
"	HOU P	1.48	.87	.25	T, Sa			
"	BRO P	1.49	.87	.25	T, Sa			
"	LAX P	1.63	1.01	.25	W, Sa			
"	BRO P	1.41	.83	.25	W, Sa			
"	CHI B	1.51	.88	.25	W, Sa			
"	CRP B	1.49	.88	.25	W, Sa			
"	FTW B	1.40	.85	.25	W, Sa			
"	FTW B	1.40	.85	.25	W, Sa			
"	HOU B	1.49	.87	.25	W, Sa			
"	LBD B	1.52	.90	.25	W, Sa			
"	MIA B	1.39	.77	.25	W, Sa			
"	SAT B	1.51	.88	.25	W, Sa			
"	FWR TC	1.70	1.20	...	Frequently Sa			
Athens, Greece.....	IDL SA	1.57	1.11	...	Sa			
"	BRO P	1.57	1.11	...	Sa			
"	IDL LI	1.59	1.19	...	M, W, F			
"	IDL BO	1.52	1.19	...	Dly			
"	MIA BO	1.56	1.21	...	Dly			
"	BOS BO	1.57	1.19	...	Dly			
"	IDL AF	1.89	1.25	...	Sa			
"	BOS AF	1.87	1.17	...	T, Th			
"	IDL E*	1.58	1.19	...	Sa, T, F, Sa except T			
"	IDL EL	1.89	1.25	...	W, Sa			
"	UL K	1.16	1.24	.27	Sa			
"	IDL SS	1.59	1.19	...	M, T, Th, F, Sa			
"	IDL TW	1.89	1.25	...	Sa, T, F, Sa except T			
"	BOS TW	1.57	1.18	...	W, Th, Sa			
"	IDL S	1.44	1.08	...	Sa, T, F			
"	IDL SR	1.59	1.19	...	Sa, W			
"	IDL P	1.44	1.08	...	Sa, W			
"	BOS P	1.41	1.07	...	...	
Auckland, N. Z.....	LAX P	1.79	1.32	.25	Sa			
"	BRO P	1.79	1.32	.25	Sa, W			
"	PDX P	1.75	1.29	.25	Sa, W			
"	SEA P	1.75	1.32	.25	Sa, W			
"	SFO BC	1.76	1.32	.25	F			
"	END BC	1.19	1.03	.25	W, Sa			
"	VR BC	1.76	1.32	.25	F			
"	BOS BO	3.64	2.73	.25	Th, Sa			
"	MIA BO	3.67	2.75	.25	Th, Sa			
"	IDL BO	3.66	2.74	.25	Dly			
Baghdad, Iraq.....	IDL AF	1.80	1.33	.25	W			
"	BOS AF	1.78	1.33	.25	T			
"	MIA AF	1.80	1.33	.25	Dly			
"	MIA BO	1.80	1.40	.25	W, Sa			
"	BOS BO	1.84	1.38	.25	Th, Sa			
"	IDL K	1.80	1.40	.25	Dly except M			
"	UL K	1.80	1.40	.25	Sa, W			
"	IDL P	1.70	1.27	.25	Sa			
"	IDL SR	1.80	1.40	.25	Sa, F			
"	IDL EL	1.80	1.40	.25	W, Sa			
Bahia, Brazil (See Sao Salvador)	...	...	...	...	...
Bahrain, Arabia.....	IDL P	1.80	1.33	.25	Dly			
"	BOS P	1.80	1.34	.25	...			
"	IDL P	1.78	1.34	.25	Sa, T, F			
Bahama, Canal Zone	MSY P	.45	.35	.19	Sa, T, F			
"	ROU P	.45	.39	.20	Dly			
"	BRO P	.45	.39	.20	Dly			
"	LAX P	.45	.39	.20	Dly			
Bangkok, Siam.....	LGA P	2.23	1.69	.33	M, F			
"	SDX P	2.70	2.03	.33	Sa, W			
"	PEA P	2.70	2.03	.33	Sa, W			
"	LAX P	2.70	2.03	.33	M, T, F			
"	BOS P	2.19	1.63	.33	M, T, F			
"	SFO P	2.70	2.03	.33	M, T, F			
"	IDL M	2.63	1.97	.25	W			
"	IDL AF	...	...	...	...
"	BOS AF	...	...	...	T		
"	LGA TH	2.34	1.80	.36	...			
"	IDL BO	2.63	1.97	.25	Dly			
"	MIA BO	2.63	1.97	.25	...			

INTERNATIONAL AIR CARGO RATE TABLES—Continued

RATES (See Note)						RATES (See Note)						RATES (See Note)					
Destination	Airport and Airline	Per 100 Lbs.	Per 100 Lbs. (Over 100 Lbs.)	Per 100 Lbs. (Over 100 Lbs.)	Per 100 Lbs. (Over 100 Lbs.)	Destination	Airport and Airline	Per 100 Lbs.	Per 100 Lbs. (Over 100 Lbs.)	Per 100 Lbs. (Over 100 Lbs.)	Per 100 Lbs. (Over 100 Lbs.)	Destination	Airport and Airline	Per 100 Lbs.	Per 100 Lbs. (Over 100 Lbs.)	Per 100 Lbs. (Over 100 Lbs.)	Per 100 Lbs. (Over 100 Lbs.)
Bangkok, Cont'd	BOS BO	2.61	1.96	.25	Th.Sa	Berlin, Germany	IDL BO	1.31	.98	.20	Dly	Budapest, Hungary	IDL AF	1.43	1.08	.25	Dly
"	IDL K	2.63	1.97	.25	Dly except M	"	MIA BO	1.32	1.00	.25	W.Sa	"	BOS AF	1.41	1.06	.25	T
"	UL K	2.77	2.08	.27	Sa,W	"	BOS BO	1.29	.97	.25	Th.Sa	"	IDL SS	1.48	1.13	.25	M,T,Th,F,Sa
"	LAX W*	2.50	1.80	.30		"	IDL AF	1.31	.98	.20	M,W	Buenos Aires, Argentina	LGA P*	1.54	.90	.25	M,T,Th,Sa
"	FDX W*	2.50	1.80	.30		"	BOS AF	1.29	.97	.25	W.Sa	"	MIA P*	1.47	.83	.25	Sa,W,F
"	SEA W*	2.50	1.80	.30		"	IDL K	1.31	.98	.20	T,W,Th	"	MSY P*	1.53	.90	.25	Dly except M
Bangkok, Belg. Congo	IDL S	1.97	1.48	.25	T,W,F	"	UL K	1.36	1.02	.23	Sa,W	"	BRO P*	1.54	.83	.25	Dly except M
Baracoa, Cuba	MIA P*	.18	.13	.06	Dly	"	IDL L	1.18	.89	.20	Dly except Su	"	HOU P*	1.56	.90	.25	Dly except M
Barbados, B.W.I.	IDL BO	.43	.30	.15	Dly	"	BOS P	1.10	.87	.20	Dly except Su	"	BRO P*	1.54	.83	.25	Dly except M
"	MIA BO	.33	.24		W.Sa	"	IDL SR	1.31	.98	.25	Sa,W	"	LAX P*	1.60	1.07	.25	Dly except M
Barcelona, Spain	IDL AF	1.33	.90	.25	T,Th,Sa	Bernina	LGA C	.15	.10	.10	Dly	"	BRO P*	1.57	.94	.25	W.F.Sa
"	BOS AF	1.30	.87	.25	T	"	DCA C	.16	.10	.10	T,Th,F	"	CRP P*	1.57	.94	.25	W.F.Sa
"	IDL SA	1.41	1.06		Sa	"	LGA P	.30	.10	.08	Dly	"	DAL B*	.60	.35	.25	W.F.Sa
"	LGA P	1.13	.85	.20	F	"	BOS P	.30	.10	.08	Dly	"	FTW B*	.60	.35	.25	W.F.Sa
"	BOS P	1.10	.83	.20	F	"	UL T	.30C	.20C	.05	T,Th,F,Sa,Sa	"	HOU B*	.60	.35	.25	W.F.Sa
"	IDL SR	1.33	.90	.25	Sa,W	"	YTO T	.30C	.20C	.05	T,Th,F,Sa,Sa	"	LRD B	1.37	.94	.25	W.F.Sa
"	IDL BO	1.33	.90	.25	Dly	"	BOS BO	.30	.10	.08	Th.Sa	"	SAT B	1.37	.94	.25	W.F.Sa
"	MIA BO	1.37	.95	.20	W.Sa	"	MIA BO	.25	.19	.05	W.Sa	"	IDL AL	1.54	.80		F
"	BOS BO	1.30	.90	.20	Th.Sa	Berna, Switzerland	IDL BO	.30	.10	.08	W.Sa	Bulawayo, S. Rhodesia	IDL BO	1.97	1.48	.25	Dly
Barcelona, Venezuela	MIA K	.41	.26	.18	W,F	"	IDL SR	1.24	.93	.25	Sa,W	"	BOS BO	2.10	1.67	.25	W.Sa
"	UL K	.61	.43	.18	W,F	"	BOS P	1.13	.85	.20	Dly	"	IDL LI	1.48	1.09	.25	Dly except Su
"	IDL K	.81	.55	.18	W,F	"	IDL P	1.16	.87	.20	Dly	Capri, Italy	IDL LI	1.48	1.09	.25	Dly except Su
Barroeta, Colombia	MIA P*	.64	.37	.15	Dly	Birmingham, England	IDL AF	1.11	.84	.20	T,Th,Sa	Catania, Cuba	IDL S	1.64	1.23	.25	Sa,T,F
"	LGA P*	.64	.37	.15	Th.Sa	"	BOS AF	1.08	.82	.20	T	"	IDL SW	1.64	1.20	.25	Dly
"	MSY P*	.60	.35	.15	Dly except Su	"	IDL K	1.08	.81	.20	Dly except T	"	IDL BO	1.84	1.23	.25	Th.Sa
"	ROU P*	.60	.35	.15	Dly except Su	"	MIA BO	1.13	.85	.20	W.Sa	"	BOS BO	1.83	1.22	.25	Th.Sa
"	BRO P*	.60	.35	.15	Dly except Su	"	BOS BO	1.08	.81	.20	Th.Sa	"	IDL AF	1.64	1.23	.25	T,Th,Sa
"	LAX P*	.77	.53	.15	Dly except Su	"	IDL BO	1.08	.81	.20	Dly	"	BOS AF	1.62	1.21	.25	T
"	MIA AV				M,Th	"	IDL SS	1.08	.81	.20	Dly	"	UL K	1.71	1.29	.27	W.Sa
Barroeta, Colombia	LGA P*	.64	.37	.15	Dly	Blantyre, Nymanland	IDL BO	1.97	1.47	.25	Dly	"	IDL K	1.64	1.23	.25	T,Th,F
"	MIA P*	.64	.37	.15	Th.Sa	"	MIA BO	2.10	1.67	.25	W.Sa	"	UL K	1.71	1.29	.27	W.Sa
"	MSY P*	.60	.35	.15	Dly	Bismarck, So. Africa	IDL BO	2.06	1.64	.35	Dly	"	IDL SS	1.84	1.23	.25	M,T,Th,F,Sa
"	ROU P*	.60	.35	.15	Dly	"	MIA BO	2.14	1.63	.25	W.Sa	"	IDL TW	1.64	1.23	.25	Dly
"	BRO P*	.60	.35	.15	Dly	Bogota, Colombia	LGA P*	.64	.37	.20	Dly	"	BOS TW	1.63	1.22	.25	T,W,Th,Sa
"	LAX P*	.77	.53	.15	Dly except Su	"	MSY P*	.60	.35	.20	Dly	"	IDL SR	1.54	1.10	.25	Sa,W,F
"	MIA AV				M,Th	"	HOU P*	.63	.38	.20	Dly	"	LGA P	1.54	1.10	.25	Sa,W,F
Batavia, Dutch East Indies	IDL BO	2.37	1.78	.25	Dly	"	BRO P*	.63	.38	.20	Dly	Calcutta, India	LGA P	2.16	1.63	.25	M,F
"	MIA BO	2.27	1.70	.25	W.Sa	"	LAX P*	.76	.53	.20	Dly	"	BOS P	2.14	1.61	.25	Dly
"	BOS BO	2.24	1.68	.25	Th.Sa	"	IDL AV				M,Th,Sa	"	PDX P	2.14	1.61	.25	Dly
Batavia, Dutch East Indies	IDL TW	2.26	1.70	.25	Sa,T,Th	Bombay, India	IDL BO	2.26	1.70	.25	Dly	"	SEC P	2.14	1.61	.25	Dly
"	IDL K	2.26	1.70	.25	T,W,Th,F	"	MIA BO	2.27	1.70	.25	W.Sa	"	SFO P	2.14	1.61	.25	Dly
"	IDL SS	2.26	1.70	.25	M,T,Th,F,Sa	"	BOS BO	2.24	1.68	.25	Th.Sa	"	LAX P	2.14	1.61	.25	Dly
"	BOS P	2.02	1.51	.25	Dly	"	IDL K	2.26	1.70	.25	T,W,Th,F	"	IDL SS	2.17	1.78	.25	M,T,Th,F,Sa
"	IDL AF	2.06	1.54	.25	Dly	"	LGA P	2.05	1.54	.25	Dly	"	IDL K	2.37	1.78	.25	Dly except F
Batavia, Dutch East Indies	MIA K	.39	.20	.15	Sa,W,F	"	IDL SS	2.26	1.70	.25	M,T,Th,F,Sa	"	UL K	2.49	1.87	.27	Th.Sa
"	IDL K	.49	.20	.15	M,Th,Sa	Bonair, N.W.I.	BOS P	2.02	1.51	.25	Dly	"	IDL BO	2.37	1.78	.25	W.Sa
"	MIA AV				M,Th	"	IDL AF	2.06	1.54	.25	Dly	"	MIA	1.98	1.49	.25	W.Sa
Batavia, Dutch East Indies	IDL BO	2.37	1.78	.25	Dly	Bonanza, Nicaragua	MIA K	.39	.20	.15	Sa,W,F	"	BOS	2.35	1.76	.25	Th.Sa
"	MIA BO	2.27	1.70	.25	W.Sa	"	MEX TA	.44	.34	.20	T,Th,Sa	"	SFO P	2.35	1.77	.25	Th.Sa
"	BOS BO	2.24	1.68	.25	Th.Sa	Bordeaux, France	IDL BO	1.22	.92	.20	Dly	"	LGA TR	2.30	1.78	.25	Dly
"	IDL TW	2.26	1.70	.25	Sa,T,Th	"	MIA BO	1.22	.92	.20	W.Sa	"	BOS	1.98	1.49	.25	W.Sa
"	IDL K	2.26	1.70	.25	T,W,Th,F	"	BOS BO	1.21	.91	.20	Th.Sa	"	IDL AF	2.35	1.76	.25	Th.Sa
"	IDL SS	2.26	1.70	.25	M,T,Th,F,Sa	"	IDL AF	1.23	.92	.25	Dly	"	BOS AF	2.34	1.75	.25	T
"	BOS P	2.02	1.51	.25	Dly	"	AF P	.31	.20	.05	Dly	"	LGA TR	2.30	1.78	.25	Dly
"	IDL AF	2.06	1.54	.25	Dly	"	IDL P	1.12	.84	.30	Dly	"	SFO PH	2.37	1.78	.25	W.Sa
Batavia, Dutch East Indies	MIA K	.39	.20	.15	Sa,W,F	"	BOS P	1.08	.82	.20	Dly	"	HNL PH	2.36	1.77	.18	W.Sa
"	IDL K	.49	.20	.15	M,Th,Sa	Brazzaville, Congo	IDL AF	2.16	1.61	.25	W.F.Sa	Calgary, Alta.	LGA T	.33	.31	.10	Dly
"	MIA AV				M,Th	"	BOS AF	2.15	1.59	.25	T	"	MIA P*	.64	.37	.20	Dly
Batavia, Dutch East Indies	IDL BO	2.37	1.78	.25	Dly	Brazzaville, Congo	UL K	2.07	1.58	.25	T,F	"	MSY P*	.60	.35	.20	Dly
"	MIA BO	2.27	1.70	.25	W.Sa	"	IDL K	1.97	1.56	.27	Sa,W	"	HOU P*	.63	.38	.20	Dly
"	BOS BO	2.24	1.68	.25	Th.Sa	"	MIA BO	1.97	1.56	.27	W.Sa	"	BRO P*	.63	.38	.20	Dly
"	IDL TW	2.26	1.70	.25	Sa,T,Th	"	BOS BO	1.96	1.57	.26	W.Sa	"	IDL AV				M,Th,Sa
"	IDL K	2.26	1.70	.25	T,W,Th,F	"	UL BO	1.74	1.31	.25	M,T,W,F,Sa	"	MIA AV				M,Th
"	IDL SS	2.26	1.70	.25	M,T,W,F,Sa	Bremen, Germany	IDL SS	1.78	.94	.20	Dly	Camaguey, Cuba	MIA P*	.13	.06	.05	Dly
"	BOS P	2.02	1.51	.25	Dly	"	IDL P	1.13	.84	.30	M,W,Sa	Campos, Mexico	MIA P*	.26	.14	.15	Dly
"	IDL AF	2.06	1.54	.25	Dly	"	BOS AF	1.23	.94	.25	Dly	"	MSY P*	.60	.35	.20	Dly
Batavia, Dutch East Indies	MIA K	.39	.20	.15	Sa,W,F	Bridgetown, Barbados	UL T	.32C	.36C	.16	T,T,F	"	HOU P*	.63	.38	.20	Dly
"	IDL K	.49	.20	.15	M,Th,Sa	"	TO T	.32C	.36C	.16	T,T,F	"	BRO P*	.63	.38	.20	Dly
"	MIA AV				M,Th	Bromley, Belgium	IDL S	1.17	.85	.20	T,F,Sa	"	LAX P*	.77	.53	.15	Dly except Su
Batavia, Dutch East Indies	IDL BO	2.37	1.78	.25	Dly	"	BOS	1.05	.78	.20	Sa	"	IDL AV				M,Th,Sa
"	MIA BO	2.27	1.70	.25	W.Sa	"	IDL SW	.92	.65	.20	Dly	"	MIA AV				M,Th
"	BOS BO	2.24	1.68	.25	Th.Sa	"	MIA BO	1.17	.88	.20	Dly	Caracas, Venezuela (See La Guaira)	MIA P*	.45	.23	.15	Dly
"	IDL TW	2.26	1.70	.25	Sa,T,Th	"	BOS BO	1.14	.87	.20	Th.Sa	"	LGA P*	.64	.37	.20	Dly
"	IDL K	2.26	1.70	.25	T,W,Th,F	"	UL BO	1.04	.77	.20	M,W,F,Sa	"	MSY P*	.63	.38	.15	Dly except M
"	IDL SS	2.26	1.70	.25	Sa,M,W,F	"	IDL SS	1.17	.88	.20	Sa,M,W,F	"	HOU P*	.65	.33	.15	Dly except M
"	BOS P	2.02	1.51	.25	Dly	"	IDL AF	1.17	.88	.20	Sa	"	BRO P*	.65	.33	.15	Dly except M
"	IDL AF	2.06	1.54	.25	Dly	"	BOS AF	1.15	.88	.20	Sa	"	LAX P*	.69	.47	.15	Dly except Su
"	MIA K	.39	.20	.15	Sa,W,F	"	UL K	1.21	.91	.22	T,W,F	"	IDL AV				M,Th,Sa
Batavia, Dutch East Indies	IDL BO	2.37	1.78	.25	Dly	Buenaventura, Colombia	MIA P*										

INTERNATIONAL AIR CARGO RATE TABLES — Continued

RATES (See Note)					RATES (See Note)					RATES (See Note)					
Destination	Airport and Airline	Per 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.	Destination	Airport and Airline	Per 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.	Destination	Airport and Airline	Per 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.	
Chilpancingo, Chih.	KLK L	.10	.06	.25	Dakar, Senegal	LGA P	1.20	.47	.35	Florianopolis, Brazil	LGA P	1.70	1.70	.25	
Mex.	IDL BO	3.30	2.82	.25	F. W. Africa	BOS P	1.25	.55	.25	"	MIA P	1.48	1.48	.25	
Christchurch, N.Z.	IDL K*	1.38	.94	.20	"	IDL AF	1.65	1.26	.25	"	MSY P	1.64	1.64	.25	
Christianand, Norway	IDL K	1.38	.94	.20	"	BOS AF	1.65	1.26	.25	"	ROU P	1.87	1.87	.25	
C. del Carmen, Mexico	MIA P*	.31	.16	.15	Damascus, Syria	LGA P	1.54	1.16	.25	"	BRO P	1.79	1.79	.25	
"	MSY P*	.37	.16	.15	"	BOS P	1.81	1.14	.25	"	LAX	2.08	2.08	.25	
"	ROU P*	.38	.16	.15	"	IDL SW	1.43	1.10	.20	Fort de France, Martinique	LGA P	.39	.39	.15	
"	BRO P*	.38	.16	.15	"	IDL SR	1.44	1.23	.25	Fort William, Ontario, Can.	LGA T	1.15	1.15	.10	
"	LAX	.41	.33	.18	"	IDL AF	1.64	1.21	.25	Fortaleza (Ceara), Brazil	LGA P*	1.39	1.39	.25	
Ciudad Juarez, Chih., Mex.	MEK L	.30	.14	.25	"	IDL BO	1.64	1.23	.25	"	MIA P*	1.23	1.23	.25	
Ciudad Trujillo, D.R.	LGA P*	.35	.31	.08	"	BOS BO	2.97	2.25	.25	"	MSY P*	1.49	1.47	.25	
"	MIA P*	.35	.31	.08	"	IDL K	1.64	1.23	.25	"	ROU P*	1.80	1.80	.25	
"	LAX	.38	.31	.18	"	IDL K	1.64	1.23	.25	"	BRO P*	1.81	1.81	.25	
Ciudad Victoria, Mexico	DAL B	.30	.10	.10	Dar-es-Salaam, Tanganyika	IDL BO	1.97	1.48	.25	"	LAX	1.73	1.73	.25	
"	FTW B	.30	.10	.10	"	MIA BO	2.10	1.67	.25	Frankfurt-on-Main, Germany	BOS P	1.10	.83	.20	
"	ATB B	.30	.10	.10	"	BOS BO	2.16	1.47	.25	"	IDL P	1.13	.85	.20	
"	LRD B	.30	.10	.10	"	BOS BO	2.16	1.47	.25	"	IDL K	1.24	.93	.20	
Cochabamba, Bolivia	MIA P*	1.13	.61	.15	Darwin, Australia	IDL BO	2.90	2.35	.25	"	UL	1.24	.97	.20	
"	ROU P*	1.22	.71	.15	"	MIA BO	3.00	2.25	.25	"	MIA BO	1.34	.93	.20	
"	BRO P*	1.22	.71	.15	"	IDL K	2.99	2.25	.27	"	BOS BO	1.23	.92	.20	
"	LAX	1.35	.85	.15	"	UL K	3.16	2.37	.25	"	IDL BO	1.24	.93	.20	
Cologne, Germany	IDL S	1.31	.91	.20	David, Panama	MIA P*	.45	.22	.20	"	MIA BO	1.18	.90	.20	
"	UL K	1.38	.94	.22	"	MSY P*	.48	.26	.20	"	IDL SS	1.24	.93	.20	
"	IDL SS	1.31	.91	.20	"	ROU P*	.48	.26	.20	"	IDL S	1.24	.93	.20	
"	MIA BO	1.31	.91	.20	"	BRO P*	.48	.26	.20	"	IDL SR	1.13	.83	.20	
"	LAX	1.31	.91	.20	"	LAX P*	.77	.89	.20	"	BOS TW	1.23	.92	.20	
Columbia, Any Destination other than those named herein	MIA P	.65	.33	.15	Delhi, India	IDL BO	2.35	1.60	.25	"	PHL TW	1.24	.93	.20	
"	MSY P	.71	.39	.15	"	MIA BO	2.37	1.70	.25	"	IDL AF	1.24	.93	.20	
"	ROU P	.74	.43	.15	"	LGA P	2.05	1.44	.25	"	BOS AF	1.23	.91	.25	
"	BRO P	.74	.43	.15	"	BOS P	2.02	1.81	.25	Freiburg, Sierra Leone	IDL AF	1.81	1.36	.25	
"	LAX	.88	.50	.20	"	LAX P	2.09	2.12	.25	"	IDL AF	1.79	1.34	.25	
"	IDL AV	.88	.50	.20	"	SFO P	2.09	2.12	.25	Gander, N.F.	LGA P	.19	.18	.15	
"	MIA AV	.88	.50	.20	"	PDX P	3.09	2.32	.25	"	BOS P	.16	.15	.15	
Colombo, Ceylon	IDL BO	2.37	1.78	.25	"	SFC P	3.09	2.32	.25	"	IDL TW	.20	.16	.15	
"	BOS BO	2.35	1.78	.25	"	IDL K*	2.35	1.99	.25	"	LGA T	.18	.17	.10	
"	BOS P	2.12	1.89	.25	"	UL K	2.37	1.78	.27	"	BOS T	.18	.14	.10	
"	IDL P	2.14	1.81	.25	"	Dhahran, Saudi Arabia	IDL TW	1.96	1.47	.25	Geneva, Switzerland	IDL S	1.24	.93	.20
Conepcion, Bolivia	MIA P*	1.16	.63	.20	"	MIA BO	1.96	1.47	.25	"	IDL SW	.90	.79	.20	
"	MSY P*	1.22	.70	.20	"	IDL BO	1.96	1.47	.25	"	IDL BO	1.24	.93	.20	
"	ROU P*	1.23	.73	.25	"	BOS BO	1.94	1.48	.25	"	MIA BO	1.25	.93	.20	
"	BRO P*	1.23	.73	.25	"	IDL P	1.80	1.35	.20	"	BOS BO	1.23	.92	.20	
"	LAX	1.39	.87	.25	"	BOS P	1.77	1.33	.20	"	MIA BO	1.19	.90	.20	
Copenhagen, Den.	IDL S	1.25	.94	.20	"	IDL K	1.90	.47	.25	"	IDL SS	1.24	.93	.20	
"	IDL SR	1.25	.94	.20	"	UL K	1.90	.47	.25	"	IDL AF	1.24	.93	.20	
"	IDL AF	1.25	.94	.20	"	Duala, Fr. W. Africa	IDL AF	2.11	1.59	.25	"	BOS AF	1.22	.91	.25
"	IDL K	1.25	.94	.20	"	BOS AF	2.09	1.57	.25	"	IDL K*	1.24	.93	.20	
"	IDL K*	1.25	.94	.20	"	Dublin, Ire.	IDL BO	1.69	.78	.20	"	UL K	1.24	.93	.20
"	MIA BO	1.25	.94	.20	"	MIA BO	1.16	.87	.20	"	IDL TW	1.24	.93	.20	
"	BOS BO	1.23	.92	.20	"	BOS BO	1.01	.76	.20	"	BOS TW	1.23	.92	.20	
"	BOS P	1.10	.83	.20	"	UL K	1.06	.80	.22	"	IDL SR	1.24	.93	.20	
"	IDL P	1.13	.85	.20	"	IDL SR	1.03	.78	.20	"	BOS P	1.10	.83	.20	
Capitlatville, Belgian Congo	IDL S	1.97	1.48	.25	"	IDL K	1.03	.77	.20	"	IDL P	1.13	.85	.20	
"	MSY P	1.38	.76	.15	Durango, Dgo., Mex.	IDL BO	2.09	1.57	.25	Georgetown, British Guiana	LGA P*	.88	.55	.15	
"	ROU P	1.42	.83	.15	"	MIA BO	2.31	1.85	.25	"	MIA P*	.89	.56	.15	
"	BRO P	1.42	.83	.15	"	BOS BO	2.37	1.55	.25	"	MSY P*	.89	.56	.15	
"	LAX	1.58	1.00	.15	Düsseldorf, Ger.	IDL SS	1.31	.91	.20	"	ROU P*	.89	.56	.15	
Castroville, Belgian Congo	IDL S	1.97	1.48	.25	"	IDL S	1.31	.91	.20	"	BRO P*	.89	.56	.15	
"	MIA P*	.41	.21	.15	"	IDL K	1.10	.82	.20	"	LAX	.73	.43	.15	
"	MSY P*	.47	.26	.15	"	UL K	1.11	.83	.22	"	IDL K	.49	.30	.15	
"	ROU P*	.50	.31	.15	"	IDL AF	1.21	.91	.20	"	MIA K	.49	.30	.15	
"	BRO P*	.50	.31	.15	"	BOS AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
"	LAX	.63	.45	.15	"	IDL K*	1.10	.82	.20	"	IDL K	.49	.30	.15	
Cauca, Colombia	MIA P*	.44	.26	.18	"	IDL K	1.11	.83	.22	"	IDL K	.49	.30	.15	
"	LGA P*	.44	.26	.18	"	IDL AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
"	MSY P*	.46	.25	.18	"	BOS AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
"	ROU P*	.48	.28	.18	"	IDL K*	1.10	.82	.20	"	IDL K	.49	.30	.15	
"	BRO P*	.48	.28	.18	"	UL K	1.11	.83	.22	"	IDL K	.49	.30	.15	
"	LAX	.77	.53	.18	"	IDL AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
"	MIA AV	.88	.50	.20	"	BOS AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
"	LAX	.88	.50	.20	"	IDL K*	1.10	.82	.20	"	IDL K	.49	.30	.15	
Cuma, Ecuador	MIA P*	.67	.36	.18	"	UL K	1.11	.83	.22	"	IDL K	.49	.30	.15	
"	MSY P*	.73	.43	.18	"	IDL AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
"	ROU P*	.76	.46	.18	"	BOS AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
"	BRO P*	.78	.48	.18	"	IDL K*	1.10	.82	.20	"	IDL K	.49	.30	.15	
"	LAX	.80	.50	.20	"	UL K	1.11	.83	.22	"	IDL K	.49	.30	.15	
Cuzco, N.W.I.	LGA P*	.40	.31	.20	"	IDL AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
"	MIA P*	.40	.31	.20	"	BOS AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
"	IDL K	.40	.31	.20	"	IDL K*	1.10	.82	.20	"	IDL K	.49	.30	.15	
"	MIA K	.40	.31	.20	"	UL K	1.11	.83	.22	"	IDL K	.49	.30	.15	
"	UL K	.40	.31	.20	"	IDL AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
Curitiba, Brazil	LGA P*	1.68	1.48	.25	"	BOS AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
"	MIA P*	1.46	1.46	.25	"	IDL K*	1.10	.82	.20	"	IDL K	.49	.30	.15	
"	MSY P*	1.60	1.60	.25	"	UL K	1.11	.83	.22	"	IDL K	.49	.30	.15	
"	ROU P*	1.82	1.82	.25	"	IDL AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
"	BRO P*	1.73	1.73	.25	"	BOS AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
"	LAX	2.06	2.06	.25	"	IDL K*	1.10	.82	.20	"	IDL K	.49	.30	.15	
					"	UL K	1.11	.83	.22	"	IDL K	.49	.30	.15	
					"	IDL AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
					"	BOS AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
					"	IDL K*	1.10	.82	.20	"	IDL K	.49	.30	.15	
					"	UL K	1.11	.83	.22	"	IDL K	.49	.30	.15	
					"	IDL AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
					"	BOS AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
					"	IDL K*	1.10	.82	.20	"	IDL K	.49	.30	.15	
					"	UL K	1.11	.83	.22	"	IDL K	.49	.30	.15	
					"	IDL AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
					"	BOS AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
					"	IDL K*	1.10	.82	.20	"	IDL K	.49	.30	.15	
					"	UL K	1.11	.83	.22	"	IDL K	.49	.30	.15	
					"	IDL AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
					"	BOS AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
					"	IDL K*	1.10	.82	.20	"	IDL K	.49	.30	.15	
					"	UL K	1.11	.83	.22	"	IDL K	.49	.30	.15	
					"	IDL AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
					"	BOS AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
					"	IDL K*	1.10	.82	.20	"	IDL K	.49	.30	.15	
					"	UL K	1.11	.83	.22	"	IDL K	.49	.30	.15	
					"	IDL AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
					"	BOS AF	1.21	.91	.20	"	IDL K	.49	.30	.15	
					"	IDL K*	1.10	.82	.20	"					

INTERNATIONAL AIR CARGO RATE TABLES—Continued

RATES (See Note)					RATES (See Note)					RATES (See Note)						
Destination	Airport and Airline	(Lb.) Per 100 Lb.	(Over 100 Lb.) Per 100 Lb.	Depart	Destination	Airport and Airline	(Lb.) Per 100 Lb.	(Over 100 Lb.) Per 100 Lb.	Depart	Destination	Airport and Airline	(Lb.) Per 100 Lb.	(Over 100 Lb.) Per 100 Lb.	Depart		
Guayaquil, Ecuador	MIA P*	.68	.33	15	Sa,T,W,F,Sa	Hong Kong, Br.	LGA P	2.28	1.77	25	M,W,Sa	Juan Ponce (Cataluña)	LGA P	1.47	.25	Sa,Ta,Sa
"	BOU P*	.71	.43	15	Sa,T,W,F,Sa	"	BOB P	2.28	1.77	25	Sa,W	"	MIA P	1.35	.25	Sa,Ta,Sa
"	BRO P*	.74	.45	15	M,T,Th,F,Sa	"	PDX P	2.28	1.77	25	Sa,W	"	MSY P	1.49	.25	Sa,Ta,Sa
"	CRP P*	.74	.45	15	Sa,T,W,F,Sa	"	SEA P	2.28	1.77	25	Sa,W	"	BOU P	1.63	.25	W,F,Sa
"	LAX P*	.75	.45	15	T,W,Sa	"	LAX P	2.28	1.77	25	Sa,W	"	BRO P	1.88	.40	M,Th
"	CRP B*	.74	.45	15	T,W,Sa	"	SFO P	2.28	1.77	25	Sa,W	"	NLD P	1.56	.25	W,F,Sa
"	DAL B*	.77	.47	20	T,W,Sa	"	SEA NW	2.28	1.77	25	Sa,W	"	LAX P	1.82	.25	W,F,Sa
"	FTW B*	.77	.47	20	T,W,Sa	"	MSP NW	2.28	1.77	25	Sa,W	"				
"	HOU B*	.74	.45	15	T,W,Sa	"	CHI NW	2.28	1.77	25	Sa,W	"				
"	LED B*	.74	.45	15	T,W,Sa	"	IDA BO	2.28	1.77	25	Sa,W	"				
"	SAT B*	.74	.45	15	T,W,Sa	"	IDA AF	2.28	1.77	25	Sa,W	"				
Haifa, Israel	IDL S*	1.84	1.23	.25	Sa,T,F	"	BOB AF	2.28	1.77	25	Sa,W	"				
Halifax, N.S.	BOS T	.08	.0755	.10	Dly	"	IDA TR	2.28	1.77	25	Sa,W	"				
Hamburg, Germany	IDL S	1.25	.94	.20	Sa,T,F	"					"					
"	IDL BO	1.25	.94	.20	Dly	"					"					
"	BOS BO	1.25	.94	.20	Ta,Sa	Honolulu, T.H.	LAX P	.71	.57	.15	Sa,M,T,W,F	"				
"	MIA BO	1.25	.94	.20	W,Sa	"	SFO P	.71	.57	.15	Two Dly	"				
"	IDL S	1.25	.94	.20	Dly	"	PDX P	.71	.57	.15	Sa,W,Th,S	"				
"	IDL K*	1.25	.94	.20	Sa,T,W,F	"	SEA P	.71	.57	.15	Sa,W,Th,S	"				
"	UL K	.26	.87	.15	T,W,Sa	"	SFO U	.71	.57	.15	Dly	"				
"	BOS P	1.10	.83	.20	Sa,T	"	LAX U	.71	.57	.15	Dly	"				
"	IDL P	1.12	.85	.20	Sa,T	"	CLE U	.71	.57	.15	Dly	"				
"	IDL AF	1.25	.94	.25	T,Th,Sa	"	YIP U	.71	.57	.15	Dly	"				
"	BOS AF	1.25	.94	.25	T,Th,Sa	"	LGA U	.71	.57	.15	Dly	"				
"	IDL SR	1.25	.94	.25	Sa,W	"	DCA U	.71	.57	.15	Dly	"				
Hamilton, Bermuda	LGA P	.25	.19	.15	Dly	"	PHL U	.71	.57	.15	Dly	"				
"	BOS P	.25	.19	.15	Dly	"	EWU U	.71	.57	.15	Dly	"				
"	UGA P	.20C	.20C	.06**Th,F,Sa	"	"	BDL U	.71	.57	.15	Dly	"				
"	YTO C	.20C	.20C	.06**Th,F,Sa	"	"	BOS U	.71	.57	.15	Dly	"				
"	LGA C	.20	.10	.11	Dly	"	CHI NW	.71	.57	.15	Dly	"				
"	MIA BO	.25	.19	.05	W,Sa	"	YIP NW	.71	.57	.15	F	"				
"	IDL BO	.20	.10	.05	Sa,F,Sa	"	MKE NW	.71	.57	.15	F	"				
Hanover, Germany	IDL BO	1.25	.94	.25	Dly	"	MPS NW	.71	.57	.15	F	"				
"	MIA BO	1.27	1.05	.25	W,Sa	"	SEA NW	.71	.57	.15	F	"				
Hargeisa, Br.	IDL BO	1.97	1.48	.25	Dly	"	CRG NW	.71	.57	.15	F	"				
"	MIA BO	2.10	1.67	.25	W,Sa	"	CHI A*	.71	.57	.15	F	"				
"	BOS BO	1.95	1.47	.25	Th,Sa	"	CLE A*	.71	.57	.15	F	"				
Havana, Cuba	MIA P*	.08	.05	.05	Dly	"	YIP A*	.71	.57	.15	F	"				
"	LGA P	.13	.14	.05	Dly	"	VR BC	.74	.60	.15	M,AN,Th,F	"				
"	CHI C	.20	.17	.05	Dly	"					"					
"	YIP C	.20	.17	.05	Dly	"					"					
"	BOS C	.18	.15	.05	Dly	"					"					
"	MSY C	.14	.11	.05	Dly	"					"					
"	STL C	.18	.15	.05	Dly	"					"					
"	IND C	.19	.16	.05	Dly	"					"					
"	BUJ C	.19	.16	.05	Dly	"					"					
"	ELD C	.20	.16	.05	Dly	"					"					
"	EVV C	.19	.15	.05	Dly	"					"					
"	FWA C	.20	.17	.05	Dly	"					"					
"	ORW C	.17	.14	.05	Dly	"					"					
"	HOT C	.22	.20	.05	Dly	"					"					
"	JAN C	.17	.14	.05	Dly	"					"					
"	KIN C	.17	.14	.05	Dly	"					"					
"	LIT C	.20	.19	.05	Dly	"					"					
"	MEM C	.17	.14	.05	Dly	"					"					
"	PUK C	.19	.18	.05	Dly	"					"					
"	SHV C	.20	.18	.05	Dly	"					"					
"	BUP C	.20	.17	.05	Dly	"					"					
"	TOL C	.20	.17	.05	Dly	"					"					
"	MKC C	.21	.19	.05	Dly	"					"					
"	SFO C	.20	.19	.05	Dly	"					"					
"	MIA K	.09	.05	.15	M,Th,Sa	"					"					
"	IDL LV	.19	.17	.10	Sa,W,F	"					"					
"	MIA EAP*	.124	.06	.15	Dly	"					"					
"	MSY Naf	.14	.11	.05	Dly	"					"					
"	MIA Naf	.08	.05	.05	Dly	"					"					
"	TPA Naf	.09	.07	.05	Dly	"					"					
"	DCA Naf	.16	.13	.05	Dly	"					"					
"	IDL Naf	.18	.14	.05	Dly	"					"					
"	BAL Naf	.17	.13	.05	Dly	"					"					
"	CHS Naf	.13	.09	.05	Dly	"					"					
"	JAX Naf	.11	.08	.05	Dly	"					"					
"	MOB Naf	.13	.10	.05	Dly	"					"					
"	ORF Naf	.15	.13	.05	Dly	"					"					
"	SAV Naf	.12	.09	.05	Dly	"					"					
"	FWR Naf	.12	.14	.05	Dly	"					"					
"	PHL Naf	.17	.13	.05	Dly	"					"					
"	BRO B	.21	.19	.05	T,W,F,Sa	"					"					
"	CRP B*	.20	.17	.05	T,W,F,Sa	"					"					
"	DAL B*	.20	.18	.05	T,W,F,Sa	"					"					
"	FTW B*	.20	.18	.05	T,W,F,Sa	"					"					
"	HOU B*	.19	.15	.05	T,W,F,Sa	"					"					
"	LRD B*	.22	.19	.05	T,W,F,Sa	"					"					
"	SAT B*	.20	.17	.05	T,W,F,Sa	"					"					
"	MIA BO	.18	.13	.05	Dly	"					"					
"	IDL AL	.18	.14	.05	F	"					"					
"	IDL BO	.18	.14	.05	M,W,Sa	"					"					
Helsinki, Finland	IDL S	1.37	1.03	.25	Dly	"					"					
"	BOS P	1.21	.91	.20	Sa	"					"					
"	IDL P	1.24	.93	.20	T,Th	"					"					
"	IDL AF	1.26	1.03	.25	"	"					"					
"	BOS AF	1.24	1.00	.25	"	"					"					
"	IDL K	1.27	1.03	.25	Dly	"					"					
"	UL K	1.43	1.07	.32	Sa,W	"					"					
Harlingen, Mexico	LAX P*	.18	.09	.15	Dly	"					"					
Holguin, Cuba	MIA P*	.15	.09	.05	Dly	"					"					

INTERNATIONAL AIR CARGO RATE TABLES—Continued

RATES (See Note)						RATES (See Note)						RATES (See Note)						
Destination	Airport and Airline	Per 100 Lbs. Per 100 Lbs. Per 100 Lbs.	(Over 100 Lbs.) Per 100 Lbs. Per 100 Lbs.	Per \$100 Value	Depart	Destination	Airport and Airline	Per 100 Lbs. Per 100 Lbs. Per 100 Lbs.	(Over 100 Lbs.) Per 100 Lbs. Per 100 Lbs.	Per \$100 Value	Depart	Destination	Airport and Airline	Per 100 Lbs. Per 100 Lbs. Per 100 Lbs.	(Over 100 Lbs.) Per 100 Lbs. Per 100 Lbs.	Per \$100 Value	Depart	
Kuwait, Kuwait....	IDL BO	1.93	1.45	.25	Dly	Livingstone, S. Rhodesia.....	IDL BO	1.97	1.48	...	Dly	Manchester, Cont'd	IDL S	1.17	.88	.20	Sa,T,F	
"	MIA BO	1.93	1.45	.25	W,Sa	"	MIA BO	2.10	1.57	...	W,Sa	"	IDL BO	1.07	.81	.20	Dly	
"	BOS BO	1.91	1.43	.25	Th,Sa	"	BOS BO	1.95	1.47	...	Th,Sa	"	MIA BO	1.15	.87	.20	W,Sa	
La Ceiba, Honduras.....	MSY TA	.43	.35	...	M,W,F	London, Belgian Congo.....	IDL S	1.97	1.48	.25	Sa,T,F	"	MIA BO	1.85	.79	.30	Th,Sa	
"	MEX TA	.26	.19	...	T,Th,Sa	London, England....	LGA P	1.00	.75	.20	Dly	Manila, Philippines..	LAX P	2.36	1.77	.25	T,F	
Lagos, Nigeria.....	IDL BO	1.99	1.37	.35	Dly	"	IDL EL	1.10	.83	.20	W,Sa	"	RFO P	2.36	1.77	.25	T,F	
"	MIA BO	1.91	1.36	.25	W,Sa	"	BOS P	.97	.73	.20	Sa	"	PDX P	2.36	1.77	.25	W,Sa	
"	BOS BO	1.47	1.36	.25	Th,Sa	"	IDL TW	1.39	.83	.20	Dly	"	SEA P	2.36	1.77	.25	Sa,W	
"	IDL AF	1.95	1.47	.25	T	"	BOS TW	1.08	.82	.20	M,W	"	LGA P	2.36	1.77	.25	T,Sa,W	
"	BOS AF	1.93	1.45	.25	T	"	PDL TW	1.12	.84	.20	W	"	BOS P	2.43	.82	.25	W,Sa	
La Guaira, Venez....	LGA P*	.50	.33	.20	Dly	"	IDL SW	1.17	.80	.20	Sa,T,F	"	RFO PH	2.36	1.77	.25	Sa	
"	MIA P*	.49	.33	.20	Dly	"	IDL BO	1.10	.83	.20	Dly	"	CLE PA	2.43	1.82	.25	T,F	
"	MSY P*	.48	.33	.20	Dly	"	BOS BO	1.96	1.47	.25	Th,Sa	"	RDF NW	2.36	1.77	.25	Two Wely	
"	BRO P*	.48	.33	.20	Dly except M	"	IDL BO	1.10	.83	.20	Dly	"	CHI NW	2.36	1.77	.25	Two Wely	
"	LAX P*	.49	.47	.30	Dly	"	IDL RS	1.10	.83	.20	Dly	"	CLE NW	2.36	1.77	.25	Two Wely	
"	MIA K*	.49	.47	.30	Dly	"	IDL AF	1.10	.83	.20	Dly	"	YIP NW	2.36	1.77	.25	Two Wely	
"	IDL LY	.49	.47	.30	Dly except M	"	BOS AF	1.08	.81	.20	T	"	MKE NW	2.36	1.77	.25	Two Wely	
"	BUJ CS	.50	.33	.15	Dly	"	IDL K*	1.10	.83	.20	Dly	"	MPS NW	2.36	1.77	.25	Two Wely	
"	CHI CS	.50	.33	.15	Dly	"	UL K	1.07	.81	.22	Sa,W	"	SEA NW	2.36	1.77	.25	Two Wely	
"	ELD CS	.50	.33	.15	Dly	"	UL T	1.140	.80C	.22	Dly except F	"	IDL BO	2.09	2.17	.20	Dly	
"	EVV CS	.50	.33	.15	Dly	London, Ont., Canada.....	LGA T	.98	.6555	.10	Dly	"	MIA BO	2.90	2.18	.20	Th,Sa	
"	FWA CS	.50	.33	.15	Dly	"	IDL SS	1.34	1.03	.25	Dly	Manizales, Colombia.....	MIA P*	.64	.39	.15	Dly	
"	GRW CS	.50	.33	.15	Dly	Lebanon, Sweden....	IDL SS	1.34	1.03	.25	Dly	"	LGA P*	.64	.37	.15	Dly	
"	HOT CS	.50	.33	.15	Dly	Lebanon, Belgian Congo.....	IDL S	1.97	1.48	.25	Sa,T,F	"	MSY P*	.63	.38	.15	Dly except M	
"	IND CS	.51	.34	.15	Dly	London, Northern Rhodesia.....	IDL BO	1.97	1.48	.25	Dly	"	BRO P*	.63	.38	.15	Dly except M	
"	JAN CS	.51	.34	.15	Dly	"	MIA BO	2.10	1.57	.25	W,Sa	"	LAX P*	.78	.62	.15	Dly except M	
"	LIT CS	.51	.34	.15	Dly	"	BOS BO	1.96	1.47	.25	Th,Sa	"	IDL AV	.84	.68	.15	M,Th	
"	MEM CS	.51	.34	.15	Dly	Lydda, Israel.....	IDL SS	1.94	1.23	.25	M,T,Th,F,Sa	Manzanillo, Baglan Congo.....	IDL S	1.97	1.48	.25	Sa,T,F	
"	PCK CS	.51	.34	.15	Dly	"	IDL EL	1.04	1.23	.25	W,Sa	"	MIA P*	.65	.35	.15	W	
"	STL CS	.51	.34	.15	Dly	"	IDL EL	1.04	1.23	.25	W,Sa	"	MSY P*	.71	.42	.15	T	
"	SHV CS	.51	.34	.15	Dly	"	BOS TW	1.02	1.23	.25	Sa	"	HOU P*	.74	.45	.15	M	
"	TUP CS	.51	.34	.15	Dly	"	IDL LI	1.04	1.23	.25	M	"	MRO P*	.84	.45	.15	T	
"	TOL CS	.51	.34	.15	Dly	"	IDL AF	1.04	1.23	.25	W,Sa	"	LAX P*	.87	.49	.20	T	
"	MKCCS	.51	.34	.15	Dly	"	IDL K	1.04	1.23	.25	Sa,T	Manzanillo, Cuba..	MIA P*	.14	.09	.05	Dly	
"	BOV CS	.51	.34	.15	Dly	"	UL K	1.71	.39	.27	Sa	Manzanillo, Venezuela.....	MIA P*	.40	.22	.15	Dly except M	
"	HAV CS	.51	.34	.15	Dly	"	IDL S	1.04	1.23	.25	W,Sa,T,F	"	LGA P*	.40	.21	.15	Dly	
"	KIN CS	.51	.34	.15	Dly	"	MIA BO	1.99	1.27	.25	W,Sa	"	MSY P*	.45	.29	.15	Dly except M	
"	IDL BO	.49	.33	.15	M,W,Sa	"	BOS BO	1.63	1.23	.25	Th,Sa	"	HOU P*	.45	.29	.15	Dly except M	
"	MIA BO	.49	.34	.15	W,Sa	"	IDL SR	1.04	1.23	.25	Sa,W	"	BRO P*	.48	.32	.15	Dly except M	
La Paz, Bolivia....	MIA P*	1.07	.38	.20	Dly except F	Manoia, Brazil.....	LGA P*	1.52	1.53	.25	W,Sa	"	LAX P*	.62	.48	.15	Dly except M	
"	MSY P*	1.13	.65	.30	Dly except Sa	"	MIA P*	1.52	1.53	.25	M,Th,Sa	"	IDL K	.60	.41	.15	Dly	
"	HOU P*	1.16	.66	.30	Dly except F	"	MSY P*	1.51	1.51	.25	Th	"	UL K	.60	.41	.15	Dly	
"	BRO P*	1.16	.66	.30	Dly except F	"	HOU P*	1.54	1.54	.25	Th	"	UL K	.60	.41	.15	Dly	
"	LAX P*	1.19	.82	.30	Dly except Sa	"	BRO P*	1.56	1.56	.25	Th	"	UL K	.60	.41	.15	Dly	
"	DAL P*	1.19	.70	.30	W,Sa	"	LAX P*	1.56	1.56	.25	Sa	Maracaibo, France..	IDL AF	1.26	.64	.25	Dly	
"	HOU P*	1.17	.69	.30	W,Sa	"	"	"	"	"	"	"	BOS AF	1.24	.92	.35	T	
"	BRO P*	1.17	.69	.30	W,Sa	"	"	"	"	"	"	"	LGA P	1.14	.86	.30	...	
"	CRP P*	1.16	.68	.30	W,Sa	"	"	"	"	"	"	"	BOS P	1.12	.84	.30	...	
"	FTW P*	1.17	.69	.30	W,Sa	Madras, India.....	IDL BO	2.37	1.78	.25	Dly	Martinique, F.W.I.	IDL BO	.40	.25	.15	Dly	
"	LED B*	1.17	.69	.30	W,Sa	"	MIA BO	2.39	1.79	.25	W,Sa	"	MIA	.33	.21	.15	W,Sa	
"	SAT B*	1.17	.69	.30	W,Sa	"	BOS BO	2.36	1.77	.25	Th,Sa	Matadi, Belgian Congo.....	IDL S	1.97	1.48	.25	Sa,T,F	
"	YIP U*	1.19	.70	.30	Sa,S	Madrid, Spain.....	IDL BO	1.23	.93	.20	Dly	"	IDL AF	2.72	2.04	.25	Weekly	
Lapevillia, Belgian Congo....	LGA T	1.73	1.39	.25	M,Th	"	MIA BO	1.20	.90	.20	W,Sa	"	BOS AF	2.70	2.02	.25	Weekly	
"	BOS P	1.70	1.38	.25	M,Th	"	BOS BO	1.21	.91	.20	Th,Sa	Mayaguez, P.R....	MIA R	.12	.109	...	Dly	
"	IDL S	1.97	1.48	.25	Sa,T,F	"	IDL AF	1.21	.91	.25	Sa,T,Th	"	LGA R	.30	.17	...	Dly	
"	LGA T	1.73	1.39	...	...	"	IDL TW	1.23	.91	.25	Sa,T,Th	Mayaguez, Cuba..	MIA P*	.15	.09	.05	Dly
Lehrbridge, Alb., Canada.....	CTB W	.32	.31	.10	Dly	"	BOS TW	1.21	.91	.20	T	Matatlan, Mexico..	HOU P*	.26	.21	.15	Dly	
"	CTB W	.34	...	.10	Dly	"	IDL K*	1.11	.83	.20	Sa,W	"	BRO P*	.26	.17	.15	Dly
Libenge, Bel. Con..	IDL S	1.9	1.48	.25	Sa,T,F	"	IDL S	1.23	.93	...	Sa,T,F	"	ELP L	.16	.13	.25	Dly	
Lima, Peru.....	MIA P*	.87	.46	.20	Dly	Malmö, Sweden....	IDL SS	1.27	.95	.20	Dly	Medan, Sumatra....	IDL BO	2.74	2.06	.25	Dly	
"	BRO P*	.88	.46	.20	Dly	"	MIA BO	1.42	1.07	.27	Dly	"	MIA BO	2.74	2.06	.25	W,Sa	
"	BRO P*	.88	.46	.20	Dly	"	MIA BO	1.42	1.07	.20	W,Sa	"	BOS BO	2.72	2.04	.25	Th,Sa	
"	LAX P*	1.06	.70	.30	Dly	"	BOS BO	1.40	1.05	.20	Th,Sa	"	IDL K	2.74	2.06	.25	Dly except Sa	
"	HOU P*	.97	.56	.30	Dly	Malta.....	IDL BO	1.42	1.07	.27	Dly	"	UL K	2.99	2.17	.27	Sa,W	
"	LED B*	.97	.56	.30	Dly	Managua, Nicaragua	MIA P*	.50	.34	.15	Dly	Medellin, Colombia.	MIA P*	.81	.39	.15	Dly	
"	SAT B*	.96	.56	.30	Dly	"	MSY P*	.43	.27	.15	Dly	"	LGA P*	.81	.38	.15	Dly	
"	BRO P*	.97	.56	.30	Dly	"	HOU P*	.41	.27	.15	Dly	"	MSY P*	.87	.33	.15	W,Sa	
"	CRP P*	.97	.56	.30	Dly	"	BRO P*	.43	.27	.15	Dly	"	HOU P*	.90	.35	.15	Sa,T,Th	
"	DAL P*	.99	.59	.30	Dly	"	MIA BO	.43	.27	.15	Dly	"	LAX P*	.90	.35	.15	Sa,T,Th	
"	FTW P*	.99	.59	.30	Dly	"	MSY TA	.43	.27	...	Dly except Sa	"	IDL AF	.73	.25	.15	T,Th,Sa	
"	IDL BO	.74	.45	.15	W,Sa	"	MEX TA	.28	.16	...	M thru Sa	"	LAX P	.81	.36	.15	T,Th,Sa	
"	IDL BO	.74	.45	.15	W,Sa	Managua, Colombia	LAX P*	.55	.39	.15	Sa,T,W,Th,Sa	"	IDL AV	.81	.36	.15	M,Th	
"	IDL LV	.91	.56	.10	M	"	LGA EA	.81	.44	.30	...	Merida, Mexico....	MIA P*	.23	.13	.15	Sa,T,Th,F	
Limala, Belg. Congo	IDL S	1.97	1.48	.25	Sa,T,F	"	MIA EA	.444	.30	...	"	"	"	.23	.13	.15	W,Sa	
Lima, Austria.....	UL K	1.34	1.01	.22	F	"	HAV EA	.296	.20	...	"	"	"	.23	.13	.15	Dly	
"	IDL SS	1.34	1.01	.25	Sa,W	"	MIA P*	.46	.34	.15	Sa,T,W,Th,Sa	"	"	"	.23	.13	.15	Dly
Lisbon, Portugal....	LGA P	1.03	.77	.30	M,Th,F	"	MSY P*	.43	.27	.15	Sa,T,W,Th,Sa	"	"	"	.23	.13	.15	Dly
"	BOS P	.93	.74	.30	M,Th,F	"	HOU P*	.41	.27	.15	Sa,T,W,Th,Sa	"	"	"	.23	.13	.15	Dly
"	IDL S	1.23	.93	.20	Sa,T,F	"	BRO P*	.43	.27	.15	Sa,T,W,Th,Sa	"	"	"	.23	.13	.15	Dly
"	IDL BO	1.13	.94	.20	Dly	"	IDL AV	.56	.34	.15	M,Th,Sa	"	"	"	.23	.13	.15	Dly
"	MIA BO	1.11	.93	.20	W,Sa	"	MIA AV	.48	.33	.15	M,Th	"	"	"	.23	.13	.15	Dly
"	BOS BO	1.10	.93	.20	Th,Sa	Manaus, Brazil....	LGA P*	1.44	1.44	.25	Dly except M	"	"	"	.23	.13	.15	Dly
"	UL BO	M,T,W,F,Sa	"	MIA P*	1.34	1.34	.25	Sa,M,T,Th,Sa	"	"	"	.23	.13	.15	Dly
"	IDL AF	1.17	.99	.30	F	"	MSY P*	1.43	1.43	.25	Sa,M,W,F,Sa	"	"	"	.23	.13	.15	Dly
"	BOS AF	1.18	.99	.30	...	"	HOU P*	1.43	1.43	.25	Sa,M,W,F,Sa	"	"	"	.23	.13	.15	Dly
"	LGA TW	1.12	.94	.20	Sa,T,Th	"	BRO P*	1.43	1.43	.25	Sa,M,W,F,Sa	"	"	"	.23	.13	.15	Dly
"	BOS TW	1.10	.93	.20	T	"	LAX P*	1.44	1.44	.25	Sa,M,T,Th,Sa	"	"	"	.23	.13	.15	Dly
"	IDL K	1.23	.93	.20	W,Sa	Manchester, England.....	IDL K*	1.07	.81	.20	Sa,W	"	"	"	.23	.13	.15	Dly

INTERNATIONAL AIR CARGO RATE TABLES — Continued

RATES (See Note)						RATES (See Note)						RATES (See Note)								
Destination	Airport and Airline	Per Lb. Per 100 Lbs.	Per Lb. Per 100 Lbs.	Per Lb. Per 100 Lbs.	Per Lb. Per 100 Lbs.	Depart	Destination	Airport and Airline	Per Lb. Per 100 Lbs.	Per Lb. Per 100 Lbs.	Per Lb. Per 100 Lbs.	Per Lb. Per 100 Lbs.	Depart	Destination	Airport and Airline	Per Lb. Per 100 Lbs.	Per Lb. Per 100 Lbs.	Per Lb. Per 100 Lbs.	Per Lb. Per 100 Lbs.	Depart
Mexico City, Mexico, Cont'd.							Nandi, Fiji	SFO BC	1.60	1.30	.25	M,T,H,F		Ottawa, Canada	LGA C	.07	.0018	.10	Dly	
"	MST TA	.51	.30	...	Dly		"	HNL BC	.99	.75	.20	M,T,H,F		"	LGA T					
"	LGA A	.24	.20	.15	Dly		"	VR BC	1.66	1.25	.35	M & Alt. T,F		Palmhang, N.E.I.	IDL BD	2.71	2.02	.25	Dly	
"	DCA A	.30	.24	.18	Dly		Naples, Italy	IDL LI	1.43	1.07	.25	Dly		"	BOS BO	2.69	2.02	.25	Tu, Sa	
"	BUF A	.32	.26	.18	Dly		"	IDL S	1.43	1.07	.25	Sa,T,F		"	MIA BO	2.71	2.04	.25	W, Sa	
"	CLE A	.30	.24	.18	Dly		"						"	IDL K	2.71	2.04	.25	T,W,Th,F		
"	STL A	.26	.19	.15	Dly		Nassau, Bahamas	MIA P*	.07	.04	.05	Three Dly		"	CRP B	.49	.16	Dly		
"	DAL A	.19	.14	.10	Dly		"	UL T	.240	.160	.06**	W, Sa		"	DAL B	.51	.31	.15	Dly	
"	LAX A	.30	.26	.18	Dly		"	ROU P*	.43	.30	.25	M,T,H,F		"	MSY TA*	.64	.46	...	M,W,F	
"	ELP A	.20	.18	.15	Dly		"	IDL BO	.17	.14	.05	Dly		"	MEX TA	.53	.39	.15	Tu, Sa	
"	SAT A	.15	.11	.10	Dly		"	MIA BO	.07	.04	.05	W, Sa		"	MIA K	.39	.30	.17	F	
"	ELP L	.20	.18	.15	Dly		"						"	IDL BO	.45	.39	.15	W, Sa		
Midway Island	LAX P	1.18	.88	.20	M,T,W,F		Natal, Brazil	LGA P*	1.45	1.45	.25	Dly except M		Panama City, Pan.	MIA P*	.47	.19	.15	Dly	
"	SFO P	1.18	.88	.20	M,T,W,F		"	MIA P*	1.35	1.25	.25	Sa,Tu, Th, Sa		"	MSY P*	.45	.26	.15	Dly	
"	PDX P	1.18	.88	.20	M,T,W,F		"	MSY P*	1.48	1.48	.25	M,Tu, Sa		"	ROU P*	.48	.30	.15	Dly	
"	SEA P	1.18	.88	.20	M,T,W,F		"	ROU P*	1.43	1.43	.25	M,Tu, Th, Sa		"	LAX P*	.61	.43	.15	Dly	
							"	BRO P*	1.54	1.54	.20	M,Tu, Th, Sa		"	ROU B	.49	.30	.15	Dly	
							"	LAX P*	1.80	1.50	.30	Tu, Sa		"	CRP B	.49	.30	.15	Dly	
Milan, Italy	IDL LI	1.33	1.00	.25	Dly		"						"	DAL B	.51	.31	.15	Dly		
"	IDL AF	1.33	1.00	.25	Tu, Sa		N'Cola, Rhodesia	IDL S	1.99	1.43	.35	Sa,Tu, Th		"	MSY TA*	.64	.46	...	M,W,F	
"	BOS AF	1.31	.85	.20	Tu, Sa		"	IDL BO	1.97	1.43	.35	Dly		"	MEX TA	.53	.39	.15	Tu, Sa	
"	IDL SW	1.04	.85	.20	Sa,Tu, Th		"	MIA BO	2.10	1.57	.25	W, Sa		"	MIA K	.39	.30	.17	F	
"	IDL S	1.33	1.00	.25	Sa,Tu, Th		"	BOS BO	1.95	1.47	.35	Tu, Sa		"	IDL BO	.45	.39	.15	W, Sa	
"	LGA TR	1.00	.85	.15	M,T,Th,F, Sa		Nice, France	IDL S	1.27	.94	.30	Sa,T,F		Pastellaria, Italy	IDL LI	1.50	1.15	.25	W	
"	IDL SS	1.33	1.00	.25	M,T,Th,F, Sa		"	IDL SS	1.27	.94	.30	M,T,Th,F, Sa		Paramaribo, Surinam	LGA P*	.64	.39	.15	Tu, Sa	
"	IDL BO	1.23	1.00	.20	Dly		"	IDL AF	1.27	.94	.30	Dly		"	MIA P*	.57	.32	.15	W,F	
"	MIA BO	1.24	1.01	.20	W, Sa		"	BOS P	1.27	.94	.30	Dly		"	MSY P*	.64	.40	.15	W,F	
"	BOS BO	1.23	.99	.20	Tu, Sa		"	LGA P	1.16	.87	.20	Dly		"	ROU P*	.67	.43	.15	Tu, Th	
"	IDL K*	1.33	1.04	.25	Sa,W		"	BOS P	1.12	.84	.20	F		"	BRO P*	.67	.43	.15	Tu, Th	
"	UL K*	1.25	1.04	.25	Sa,W		"	IDL BO	1.27	.94	.30	Dly		"	LAX P*	.67	.43	.15	Tu, Th	
"	IDL TW	1.33	1.00	.25	M,W,Th,F		"	BOS BO	1.27	.94	.30	W, Sa		"	IDL K	.64	.39	.15	Sa,W, Sa	
"	BOS TW	1.32	.99	.25	W,Th		"	UL K*	1.27	.99	.32	Sa,W,F		"	MIA K	.58	.34	.15	Sa,W, Sa	
Minatitlan, Mexico	MIA P*	.37	.19	.15	Dly		"	IDL SR	1.16	.87	.30	Sa,W,F		"	UL K	.75	.47	.17	F	
"	MSY P*	.31	.17	.18	Dly		Ninewa, Cyprus	IDL BO	.59	1.29	.35	Dly		Paris, France	IDL S	1.17	.88	.30	Sa,T,F	
"	ROU P*	.22	.18	.15	Dly		"	MIA BO	1.60	1.20	.25	W, Sa		"	IDL SW	.91	.74	.20	Dly	
"	BRO P*	.21	.13	.18	Dly		"	BOS BO	1.57	1.18	.35	Tu, Sa		"	IDL BO	1.17	.88	.30	Dly	
"	LAX P*	.37	.29	.15	Dly		Naples, San. Mex.	MEX L	.19	.13	.25	Dly		"	MIA BO	1.17	.88	.30	W, Sa	
Mogadishu, Italian Somaliland	IDL BO	1.97	1.48	.25	Dly		"						"	BOS BO	1.15	.87	.30	Tu, Sa		
"	MIA BO	2.10	1.57	.25	W, Sa		Nome, Alaska	SEA P	.58	.35	.15	Sa,W		"	UL BO	1.04	.78	.30	M,W,F, Sa	
"	BOS BO	1.67	1.47	.35	Tu, Sa		Norrkoping, Sweden	IDL SS	1.17	.88	.30	Dly		"	SS L	1.47	.82	.30	Dly, T,W,F, Sa	
Montego Bay, Jamaica	MIA P*	.18	.09	.05	Sa,Tu, W, Sa		North Bay, Ont., Canada	LGA T	.08	.0785	.10	Dly		"	IDL AF	1.17	.88	.30	Dly	
"	MIA BO	.19	.09	.05	M,W, Sa		Noroon, New Caledonia	LAX P	1.77	1.33	.25	...		"	IDL K	1.16	.80	.30	Dly ex. M,Tu	
"	IDL BO	.39	.18	.05	Dly		"	SFO P	1.77	1.33	.25	...		"	K	1.04	.78	.30	Sa, Tu, W, Sa	
Monterrey, Mexico	MIA P*	.61	.35	.15	Dly except Sa		"	SEK P	1.77	1.33	.25	...		"	IDL TW	1.17	.88	.30	13 Weekly	
"	LGA P*	.61	.35	.15	Sa, Tu		"	IDL AF	2.43	2.57	.35	...		"	BOS TW	1.15	.87	.20	Dly ex. M,Tu	
"	ROU P*	.60	.34	.15	Dly except Sa		"	BOS AF	3.41	2.55	.35	...		"	BOS P*	1.62	.78	.30	Sa, Tu, W, Sa	
"	BRO P*	.60	.34	.15	Dly except Sa		Nueva Guinea (Isle of Pines), Cuba	MIA EA	.14	...	...	Dly		"	BOS P*	1.62	.78	.30	Sa, Tu, W, Sa	
"	LAX P*	.74	.40	.15	Dly except Sa		Nueva Ocotepetlan, Mex.	MSY TA	.47	.38	...	M,W,F		Paramaribo, Brazil	LGA P*	.64	.39	.15	Tu, Sa	
"	IDL AV	.31	.38	.15	M,Tu, Sa		"	MEX TA	.37	.31	...	Tu, Sa		"	MIA P*	.59	.48	.15	M,W,F	
"	MIA AV	.31	.38	.15	M,Tu		"	IDL SR	1.16	.87	.30	Sa,W,F		"	MSY P*	.64	.40	.15	M,W,F	
Monterrey, Mexico	DAL A	.11	.08	.15	Dly		Nuremberg, Germany	IDL K*	1.28	.96	.20	F		"	BRO P*	.59	.48	.15	M,W,T,F	
"	ELP A	.13	.09	.15	Dly		"	UL S	1.33	1.04	.25	Sa, Tu, Th, Sa		"	LAX P*	.61	.43	.15	M,W,T,F	
"	LAX A	.23	.18	.15	Dly		"	IDL SS	1.28	.96	.20	Dly		"	ROU P*	.67	.43	.15	M,W,T,F	
"	SAT A	.07	.06	.15	Dly		"	IDL S	1.28	.96	.20	Sa,T,F		"	BRO P*	.63	.38	.15	Dly	
"	STL A	.28	.15	.28	Dly		"	IDL AF	1.28	.96	.20	M,W,F		"	LAX P*	.76	.42	.15	Dly	
"	DCA A	.34	.17	.15	Dly		"	BOS AF	1.28	.96	.20	Sa, Tu, Th, Sa		"	IDL AV	.76	.42	.15	Tu, Sa	
"	BUF A	.34	.30	.15	Dly		"	IDL SW	.97	.78	...	...		"	MIA AV	.34	.29	.15	M,Tu	
"	CLE A	.23	.17	.15	Dly		Oaxaca, Mexico	MIA P*	.61	.35	.15	Dly		"						
"	STL A	.18	.13	.15	Dly		"	ROU P*	.31	.14	.15	Dly		Fin. Italy	IDL SW	1.08	.88	.30		
"	NLD P	...	...	...	Dly		"	BRO P*	.19	.12	.15	Dly		"	LGA P*	.35	.35	.15		
Montevideo, Uruguay	LGA P*	1.80	.88	.25	M,T,Th,F, Sa		"	LAX P*	.55	.38	.15	Dly		Finis a Pina, Guad.	LGA P*	.35	.35	.15		
"	MIA P*	1.43	.80	.25	Sa,Tu, Th, F, Sa		Okinawa	EDF NW	2.36	1.77	.25	Three Wkly		Foros, P. R.	MIA R	.13	.104	...	Dly	
"	MIA P*	1.43	.80	.25	Sa,Tu, Th, F, Sa		"	CHI NW	2.36	1.77	.25	Three Wkly		"	LGA R*	.30	.17	...	Dly	
"	ROU P*	1.43	.80	.25	Sa,Tu, Th, F, Sa		"	MEX NW	2.36	1.77	.25	Three Wkly		Popayan, Colombia	MIA P*	.61	.30	.15	Dly except Sa	
"	LAX P*	1.83	.90	.25	M, Th, F		"	MPS NW	2.36	1.77	.25	Three Wkly		"	LGA P*	.71	.32	.15	Dly except Sa	
"	BRO P*	1.83	.90	.25	M, Th, F		"	SEA NW	2.36	1.77	.25	Three Wkly		"	MSY P*	.67	.40	.15	Dly except Sa	
"	LAX P*	1.83	.90	.25	M, Th, F		"	LAX P	2.36	1.77	.25	Three Wkly		"	ROU P*	.70	.40	.15	Dly except Sa	
"	BRO P*	1.83	.90	.25	M, Th, F		"	SFO P	2.36	1.77	.25	M, Th, F		"	BRO P*	.70	.40	.15	Dly except Sa	
"	LAX P*	1.83	.90	.25	M, Th, F		"	FDX P	2.36	1.77	.25	Sa,W		"	LAX P*	.82	.54	.20	Dly except Sa	
"	BRO P*	1.83	.90	.25	M, Th, F		"	SEA P	2.36	1.77	.25	Sa,W		"	FDX P	.82	.54	.20	Dly except Sa	
"	LAX P*	1.83	.90	.25	M, Th, F		"	OAK TR	1.93	1.40	.15	...		"	MIA AV	.61	.30	.15	M,Tu	
"	BRO P*	1.83	.90	.25	M, Th, F		"	SFO PH	2.36	1.77	.25	W, Sa		Port au Prince, Haiti	MIA P*	.15	.13	.15	Dly	
Montreal, Que., Canada	LGA C	.66	.40	...	Dly		Oran, Algeria	IDL AF	1.36	1.02	.35	Sa, Wkly		"	LGA P*	.35	.35	.15	Dly	
"	CHI T	.12	.1065	.10	Dly		"	MIA P*	1.34	1.00	.35	Sa, Wkly		"	IDL	.25	.21	.15	Dly	
"	CLE T	.09	.065	.10	Dly		Oruro, Bolivia	MIA P*	1.10	.59	.20	Sa,T		Port Elizabeth, U. of S. Af.	IDL BO	2.17	1.83	.25	Dly	
"	CLE TA	2.68	2.65	.10	Dly		"	MSY P*	1.18	.66	.25	Sa,Tu, Sa		"	BOS BO	2.15	1.82	.25	Tu, Sa	
"	LGA NE	2.08	6.35	.10	Dly		"	ROU P*	1.19	.69	.20	M,F, Sa		Port of Spain, Trinidad	LGA P*	.45	.30	.15	Dly	
"	BOS NE	1.08	4.55	.10	Dly		"	LAX P*	1.23	.83	.25	Sa,Tu, Sa		"	MIA P*	.45	.30	.15	Dly	
Mossoro, Brazil	LGA P	1.41	...	.18	T,F		Oulu, Norway	IDL SS	1.35	.94	.30	Dly		"	MSY P*	.45	.30	.15	Dly	
"	MIA P	1.24	...	.18	T,F		"	IDL S	1.35	.94	.30	Sa,T,F		"	ROU P*	.48	.34	.15	Dly	
"	MSY P	1.48	...	.18	T,F		"	IDL BO	1.35	.94	.30	Dly		"	BRO P*	.48	.34	.15	Dly	
"	ROU P	1.48	...	.18	M,Tu		"	MIA BO	1.33	.99	.35	W, Sa		"	LAX P*	.62	.48	.15	Dly	
"	BRO P	1.48	...	.18	M,Tu		"	BOS BO	1.33	.99	.35	Tu, Sa		"	UL T	.84	.37C	.16**	F	
"	LAX P	1.78	...	.18	M,Tu		"	IDL AF	1.25	.94	.30	Sa, Wkly		"	YTO T	.84C	.37C	.16**	F	

INTERNATIONAL AIR CARGO RATE TABLES—Continued

RATES (See Note)							RATES (See Note)							RATES (See Note)						
Destination	Airport and Airline	Per 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.	Destination	Airport and Airline	Per 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.	Destination	Airport and Airline	Per 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.	Per 100 Lbs.
Port Sudan.....	IDL BO	1.88	1.41	.25	Dly		Rome, Denmark.....	IDL SS	1.58	.97	.20	Dly		Santa Maria.....	LGA P	.78	.80	.20	Su,M,Th,F	
Arg. Reg. Sudan.....	MIA BO	1.92	1.44	.25	W,Sa		Rome, Italy.....	IDL LI	1.39	1.05	.25	W,F		.....	BOS P	.78	.87	.15	M,Th,F	
"	BOS BO	1.86	1.40	.25	Th,Sa		"	IDL SW	1.12	.90	.20	W,F		"	BOS BO	.85	.94	.15	M,Th,F	
Puerto Alegre, Brazil.....	LGA P*	1.52	.89	.25	Dly		"	IDL BO	1.30	1.05	.25	Dly		"	MIA BO	.90	.78	.20	W,Sa	
"	MIA P*	1.43	.86	.25	Dly		"	BOS BO	1.37	1.03	.25	Th,Sa		"	IDL BO	.87	.45	.39	M,W,Sa	
"	MSY P*	1.69	1.03	.25	Dly		"	MIA BO	1.32	.99	.25	Dly		Santa Maria, Columbia.....	MIA P*	.48	.23	.15	Sa,Th	
"	HOU P*	1.69	1.11	.25	Dly		"	IDL SS	1.30	1.05	.25	M,T,Th,F,Sa		"	LGA P*	.86	.83	.15	Dly	
"	BRO P*	1.98	1.03	.25	Dly		"	IDL AF	1.39	1.06	.25	Dly		"	MSY P*	.85	.85	.15	Dly except M	
"	LAX P*	2.14	2.14	.25	Dly		"	IDL K*	1.37	1.03	.25	Dly		"	ROU P*	.85	.83	.15	Dly except Su	
Prague.....	IDL S	1.30	.96	.20	Su,T,F		"	IDL K*	1.39	1.05	.25	Sa,T,W,F		"	BRO P*	.85	.83	.15	Dly except Su	
Czechoslovakia.....	IDL SW	1.08	.82	.20	Dly		"	UL K	1.45	1.00	.20	Sa,T,F		"	LAX P*	.89	.47	.15	Dly except M	
"	IDL BO	1.30	.96	.20	Dly		"	IDL TW	1.39	1.05	.25	16 Wkly		"	IDL AV	.85	.23	.15	M,Th,Sa	
"	MIA BO	1.38	1.01	.25	Dly		"	BOS TW	1.37	1.03	.25	T,W,Th,Sa		"	MIA AV	.46	.34	.15	M,Th	
"	BOS BO	1.28	.96	.20	Th,Sa		"	IDL SR	1.39	1.05	.25	Sa,W		Santiago, Chile.....	MIA P*	1.36	.72	.15	Sa,W,F	
"	IDL SS	1.30	.96	.20	M,T,Th,F,Sa		"	LGA P	1.34	.90	.25	T		"	MSY P*	1.37	.79	.15	Dly except M	
"	IDL AF	1.30	.96	.20	Dly except W		"	BOS P	2.24	.90	.25	T		"	ROU P*	1.40	.82	.15	Dly except M	
"	BOS AF	1.28	.97	.20	Dly except W		Saigon, Indo China.....	IDL AF	2.32	1.74	.15	Twice Wkly		"	BRO P*	1.40	.82	.15	Dly except M	
"	IDL K*	1.30	.96	.20	W,F		"	BOS AF	2.29	1.72	.15	Twice Wkly		"	LAX P*	1.43	.96	.15	Dly	
"	UL K	1.35	1.01	.22	W		"	IDL BO	2.70	2.03	.25	Dly		"	MIA BO	1.68	.96	.15	Dly	
"	IDL SR	1.30	.96	.25	Sa,W		"	MIA BO	2.61	1.96	.25	W,Sa		"	IDL BO	1.18	.82	.15	W,Sa	
Freston, Cuba.....	MIA P*	.20	1.06	.06	Dly		"	BOS BO	2.68	2.01	.25	Th,Sa		Santiago, Cuba.....	MIA P	.18	.06	.06	Four Dly	
Frederick, Scotland.....	IDL SS	1.05	.78	.20	Dly		St. Cruz, Virg. Is.....	LGA P	.27	.21	.06	M,Th,Sa		"	IDL BO	.27	.20	.06	Dly	
"	UL T	1.06C	.80C	.22	Sa,M,Th		"	MIA P*	.20	.16	.06	M,Th,Sa		"	MIA BO	.19	.09	.05	W,Sa	
"	IDL K	.94	.71	.30	M,T,W,F,Sa		St. John, N. B.....	BOS T	.06	.0635	.10	Dly		Sao Luis, Brazil.....	LGA P*	1.69	.72	.20	Sa,T,Th,Sa	
"	IDL BO	1.05	.78	.20	W,Sa		St. John, Antigua, B.W.I.....	LGA P*	.34	.24	.16	W,Th,Sa		"	MIA P*	1.18	1.18	.20	Sa,T,Th,Sa	
"	MIA BO	1.11	.83	.20	W,Sa		"	MIA P*	.34	.18	.16	W,Th,Sa		"	MSY P*	1.28	1.28	.25	Sa,T,Th,Sa	
"	BOS BO	1.03	.76	.20	Th,Sa		St. John's, N. F.....	BOS T	.17	.1685	.10	Dly		"	ROU P*	1.43	1.43	.25	M,W,F,Sa	
Funkia, Finland.....	DAL B	.41	....	.17	Dly		St. Kitts, B.W.I.....	IDL BO	.27	.29	.05	Dly		"	LAX P*	1.43	1.43	.25	M,W,F,Sa	
"	FTW B*	.41	....	.17	Dly		"	MIA BO	.27	.20	.05	W,Sa		Sao Paulo, Brazil.....	LGA P*	1.43	.96	.25	Dly	
"	LRD B	.37	....	.17	Dly		St. Lucia, B.W.I.....	LGA P*	.40	.27	.06	Th,Sa		"	MIA P*	1.32	.82	.20	Dly	
"	SAT B	.34	....	.17	Dly		"	MIA P*	.31	.21	.05	Th,Sa		"	MSY P*	1.40	.86	.25	Dly	
Puerto Cabezas, Nic. MEX TA	TA	.69	.47	....	M,W,F		"	IDL BO	.40	.27	.06	Th,Sa		"	ROU P*	1.75	1.64	.25	Dly	
Puerto Cortes, Hond.	MEX TA	.62	.34	....	M,W,F		"	BRO P*	.31	.21	.05	Th,Sa		"	BRO P*	.87	.86	.25	Dly	
"	MEX TA	.35	.18	....	T,Th,Sa		"	LAX P*	.34	.21	.05	W,Sa		"	LAX P*	1.99	1.99	.25	Dly	
Puerto Suarez, Bolivia.....	MIA P*	1.16	.63	.20	Sa,W		St. Thomas, Virgin Is. (U.S.)	LGA P*	.26	.21	.15	Th,Sa		"	EWRT TC	1.40	.88	.....	Frequently	
"	MSY P*	1.22	.70	.26	T,Sa		"	MIA P	.19	.15	.15	Th,Sa		"	BRO B	1.67	.97	.25	M,T,Th,Sa	
"	BRO P*	1.28	.73	.26	T,Sa		Salisbury, So. Rhod.	IDL BO	1.97	1.48	.25	W,Sa		"	CRP B	.71	.90	.25	M,T,Th,Sa	
"	LAX P*	1.39	.87	.26	T,Sa		"	MIA BO	2.12	1.65	.25	W,Sa		"	DAL B*	1.43	.25	.25	M,T,Th,Sa	
"	HOU P*	1.35	.73	.26	T,Sa		"	BOS BO	1.86	1.47	.25	Th,Sa		"	FTW B*	1.42	.87	.25	M,T,Th,Sa	
Pusan, Korea.....	CHI NW	2.36	1.77	.20	Sa		Salta, Argentina.....	MIA P*	1.34	.98	.25	M		"	ROU B*	1.76	1.04	.25	M,T,Th,Sa	
"	SEA NW	2.38	1.77	.20	Sa		"	MSY P*	1.30	.75	.25	M		"	LRD B	1.42	.87	.25	M,T,Th,Sa	
"	MSP NW	2.38	1.77	.20	Sa		"	HOU P*	1.33	.75	.25	Su		"	SAT B*	1.43	.87	.25	M,T,Th,Sa	
Quito, Ecuador.....	MIA P*	.64	.24	.15	Dly except Su		"	BRO P*	1.33	.75	.25	Su		Sao Salvador, Brazil.....	LGA P*	1.88	1.88	.25	Dly except M	
"	MSY P*	.70	.41	.15	Dly except F		"	LAX P*	1.46	.92	.25	M		"	MIA BO	1.28	1.28	.25	Dly	
"	HOU P*	.73	.44	.15	Dly except F		Salzburg, Austria.....	IDL K	1.33	1.00	.20	F		"	MSY P*	1.34	.84	.25	Dly	
"	BRO P*	.73	.44	.15	Dly except F		"	UL K	1.38	1.04	.22	Su		"	HOU P*	1.72	1.72	.25	Dly	
"	LAX P*	.86	.44	.15	Dly except F		"	IDL SR	1.33	1.00	.25	Sa,W		"	BRO P*	1.64	1.64	.25	Dly	
"	IDL AV	.74	.44	.15	M,Th,Sa		"	IDL S	1.33	1.00	.....	T,F,Sa		"	LAX P*	1.94	1.94	.25	Dly	
"	MIA AV	.64	.35	.15	M,Th		San Ignacio de Velasco, Bolivia.....	MIA P*	1.18	.63	.20	T,Sa		Shanghai.....	IDL AF	2.82	1.89	.25	.....
Rangoon, Burma.....	IDL BO	2.45	1.84	.25	Dly		"	MSY P*	1.22	.70	.26	T,Sa		"	BOS AF	2.49	1.87	.25	.....
"	MIA BO	2.45	1.84	.25	W,Sa		"	HOU P*	1.22	.73	.26	M,Sa		Shannon, Eire.....	LGA P	.91	.68	.20	Dly	
"	BOS BO	2.45	1.82	.25	Th,Sa		"	BRO P*	1.22	.73	.26	M,Sa		"	BOS P	.88	.66	.20	Sa	
"	IDL K	2.45	1.84	.25	Dly except M		"	LAX P*	1.39	.87	.25	M,Sa		"	IDL SW	1.00	.75	.25	W,Sa	
Rosario (Paranaibo) Brazil.....	LGA P	1.48	1.48	.25	Dly except M		San Jose, Bolivia.....	MIA P*	1.16	.63	.20	Sa,T		"	FTW B*	.71	.61	.20	W,Sa	
"	MIA P	1.16	.75	.20	Dly except M		"	MSY P*	1.22	.70	.26	Sa,T		"	CRP B	1.02C	.77C	.25	W	
"	MSY P	1.60	1.80	.25	Dly		"	HOU P*	1.22	.73	.26	M,Sa		"	MIA BO	1.12	.84	.20	Th,Sa	
"	HOU P	1.64	1.84	.25	Dly		"	BRO P*	1.22	.73	.26	M,Sa		"	BOS BO	.98	.74	.20	Th,Sa	
"	BRO P	1.94	1.84	.25	Dly		"	LAX P*	1.39	.87	.25	M,Sa		"	IDL TW	1.00	.78	.20	Th	
"	LAX P	1.94	1.84	.25	Dly		San Jose, Costa Rica.....	MIA P*	.45	.24	.15	Dly		"	BOS TW	.98	.74	.20	M,W,Th,Sa	
Reggio Calabria, Italy.....	IDL LI	1.67	1.11	.25	Dly except Su		"	MSY P*	.45	.24	.15	Dly		"	PHL TW	1.02	.78	.20	W	
Regina, Sask., Canada.....	LGA T	.38	.35	.10	Dly		"	HOU P*	.45	.24	.15	Dly		"	IDL SR	1.00	.78	.20	Sa,W	
Region Island.....	IDL AF	2.43	1.83	.25	Weekly		"	BRO P*	.45	.24	.15	Dly		"	IDL K	1.00	.78	.20	Sa,Th	
"	BOS AF	2.40	1.81	.25	Weekly		"	LAX P*	.45	.24	.15	Dly		Singapore, Mal. St.....	IDL BO	2.68	2.01	.25	Dly	
Reykjavik, Iceland.....	BOS P	.25	.58	.30	.....		"	UL K	.69	.41	.17	M,W,Sa		"	IDL BO	2.68	2.01	.25	W,Sa	
"	IDL P	.25	.58	.30	.....		"	MIA P*	.45	.24	.15	Dly		"	BOS BO	2.68	2.01	.25	Th,Sa	
Rio de Janeiro, Bra. Brazil.....	LGA P*	1.37	.84	.25	Two Dly		"	HOU P*	.45	.24	.15	Dly		"	SFO P	2.41	1.81	.25	T	
"	MIA P*	1.52	.86	.25	Two Dly		"	LAX P*	.45	.24	.15	Dly		"	LAX P	2.41	1.81	.25	Sa	
"	MSY P*	1.64	.91	.25	Two Dly		"	MSY TA	.48	.28	.....	Dly except Su		"	BOS P	2.41	1.75	.25	.....
"	HOU P*	1.62	.87	.25	Dly		"	BRO TA	.48	.28	.....	Dly except Su		"	IDL AF	2.67	2.00	.....	.....
"	BRO P*	1.60	.92	.25	Dly		"	LAX TA	.48	.28	.....	Dly except Su		"	BOS AF	2.65	1.98	.25	.....
"	LAX P*	1.94	1.84	.25	Dly		"	UL K	.69	.41	.17	M,W,Sa		"	UL K	2.65	2.01	.25	Sa,W	
"	KWR TC	1.23	.84	.....	Frequently		"	MIA K	.55	.26	.15	M,W,Sa		"	MEX TA	.55	.42	.....	M,W,F	
"	DAL B*	1.42	.87	.25	M,T,Th,Sa		San Juan, Puerto Rico.....	LGA P*	.22	.18	.08	Five Dly		"	.....	.42	.35	.....	T,Th,Sa	
"	HOU B	1.76	1.04	.25	M,T,Th,Sa		"	MIA P*	.22	.18	.08	Five Dly		"	MSY TA	.55	.42	.....	M,W,F	
"	BRO B	1.67	.97	.25	M,T,Th,Sa		"	MSY P*	.22	.18	.08	Five Dly		"	MEX TA	.42	.35	.....	T,Th,Sa	
"	CRP B*	1.65	.94	.25	M,T,Th,Sa		"	MIA P*	.22	.18	.08	Five Dly		"	.....	.42	.35	.....	T,Th,Sa	
"	FTW B*	1.42	.87	.25	M,T,Th,Sa		"	CHI P*	.22	.18	.08	Five Dly		"	IDL SS	1.60	1.21	.25	M,T,Th,F,Sa	
"	LRD B*	1.42	.87	.25	M,T,Th,Sa		"	YIP P*	.22	.18	.08	Five Dly		"	IDL AF	1.60	1.20	.....	.....
"	SAT P*	1.42	.87	.25	M,T,Th,Sa		"	LGA P*	.22	.18	.08	Five Dly		"	BOS AF	1.58	1.18	.....	.....
"	IDL AL	1.43	.88	.....	Sa,Th		"	MIA P*	.22	.18	.08	Five Dly		"	.....	1.58	1.18	.....	.....
"	YIP U*	1.43	.88	.25	Sa,Th		San Luis Potosi, S.L.P., Mexico.....	ELP L	.65	.33	.25	Dly		Sorabaya, Java, N.E.I.....	IDL K	2.88	1.94	.25	T,W,Th,F	
Roberta Field, Lib. Bolivia.....	IDL AF	1.80	1.35	.25	Twice Wkly		San Salvador, El Salvador.....	MIA P*	.22	.21	.15	Dly		Stanleyville, Bel Congo.....	IDL S	1.97				

INTERNATIONAL AIR CARGO RATE TABLES—Continued

RATES (See Note)						RATES (See Note)						RATES (See Note)					
Destination	Airport and Airline	(U.S.) Per 100 Lbs.	(U.S.) Per 100 Lbs.	(U.S.) Per 100 Lbs.	Depart	Destination	Airport and Airline	(U.S.) Per 100 Lbs.	(U.S.) Per 100 Lbs.	(U.S.) Per 100 Lbs.	Depart	Destination	Airport and Airline	(U.S.) Per 100 Lbs.	(U.S.) Per 100 Lbs.	(U.S.) Per 100 Lbs.	Depart
Stuttgart, Germany	LGA P	1.13	.88	.20	Dly ex. W.S.a	Tokyo, Japan, Cont'd	IDL SS	3.25	2.44	.25	Dly	Vancouver, B.C.	MIA P*	.13	.08	.05	Dly
"	BOS P	1.10	.83	.20	Sa	"	CHI NW	2.38	1.77	.25	Four Wkly	"	MSY P*	.29	.19	.15	Dly
"	IDL SS	1.26	.88	.20	Dly	"	MKE NW	2.38	1.77	.25	Four Wkly	"	HOU P*	.34	.18	.15	Dly
"	IDL SR	1.26	.88	.25	Sa, W	"	MPS NW	2.38	1.77	.25	Four Wkly	"	BRO P*	.31	.16	.15	Dly
"	IDL AF	1.26	.88	.25	Sa, W	"	PIT NW	2.38	1.77	.25	Four Wkly	"	LAX P*	.35	.28	.18	Dly
"	BOS AF	1.34	.88	.25	Sa, T, Th	"	IDL BO	3.25	2.44	.25	W.S.a	"	DAL B	.43	.28	.15	Dly
"	IDL K	1.26	.88	.25	Sa, T, Th	"	BOS BO	3.23	2.42	.25	Th, Sa	"	FTW B	.43	.28	.15	Dly
"	K	1.31	.88	.25	Sa, T, Th	"	IDL AF	3.24	2.43	.25	.....	"	LRD B	.43	.28	.15	Dly
"	IDL SW	.97	.78	.....	.....	"	AF	3.22	2.41	.25	.....	"	SAT B	.43	.28	.15	Dly
Suva, Fiji Islands	LAX P	1.60	1.20	.25	Sa, W	"	SEO PH	3.26	1.77	.15	W.S.a						
"	SFO P	1.60	1.20	.25	Sa, W	"	IDL K	3.25	2.44	.25	Dly except M						
"	SFO BC	1.60	1.20	.25	M, Th, F												
"	HNL BC	.99	.75	.20	M, Th, F												
"	VR BC	1.60	1.25	.25	M, Th, F												
Sydney, Australia	LAX P	2.01	1.81	.25	Sa, W	Toronto, Ont., Can.	LGA A	.08	.0455	.04	Dly	Victoria, Brazil	LGA P	1.86	1.68	.25	Sa, W, F, Sa
"	SFO P	2.01	1.81	.25	Sa, W	"	LGA T	.08	.0455	.10	Dly	"	MSY P*	1.41	1.41	.25	F
"	IDL K	2.31	2.49	.25	Dly except M	Torreon, Coah., Mex.	ELP L	.10	.08	.25	Dly	"	MSY P*	1.89	1.89	.25	F, Sa
"	UL K	3.80	2.69	.27	W.S.a	Trieste, Italy	IDL LI	1.33	1.12	.25	F	"	HOU P*	1.81	1.81	.25	F
"	IDL BO	3.31	2.49	.25	Dly	Trinidad, Cuba	MIA P*	.15	.09	.05	Dly	"	BRO P*	1.78	1.78	.25	F
"	MIA BO	3.31	2.49	.25	W.S.a	Trinidad, Trin.	IDL BO	.45	.30	.15	M, W, Sa	"	LAX P*	2.03	2.03	.25	F
"	BOS BO	3.29	2.47	.25	Th, Sa												
"	SFO BC	2.01	1.81	.25	M, Th												
"	HNL BC	1.43	1.08	.25	M, Th												
"	IDL AF	2.08	1.87	.25	M, Sa, Th												
"	IDL AF	2.39	2.47	.25	.....											
Sydney, N. S.	BOS T	.10	.0885	.10	Dly												
Taipei, Formosa	SFO PH	2.36	1.77	.25	W.S.a												
"	MKE NW	2.36	1.77	.25	Weekly												
"	MPS NW	2.36	1.77	.25	Weekly												
"	PDX NW	2.36	1.77	.25	Weekly												
"	SFO NW	2.36	1.77	.25	Weekly												
Talara, Peru	MIA P*	.72	.33	.15	Sa, T, W, F, Sa												
"	MSY P*	.78	.43	.20	Sa, T, W, F, Sa												
"	BRO P*	.81	.48	.20	M, T, Th, F, Sa												
"	BRO P*	.81	.48	.20	M, T, Th, F, Sa												
"	LAX P*	.94	.63	.20	Sa, T, W, F, Sa												
Tampico, Mexico	HOU P*	.13	.09	.15	Dly												
"	LAX P*	.10	.08	.15	Dly												
"	LAX P*	.38	.28	.15	Dly												
Tanzenar, Madagascar	IDL AF	2.48	1.86	.25	Weekly												
"	BOS AF	2.48	1.84	.25	.....											
Tangier, Morocco	IDL AF	1.26	.86	.25	.....											
"	BOS AF	1.34	.83	.25	.....											
Tapachula, Mexico	MIA P*	.42	.31	.15	Dly												
"	MSY P*	.32	.19	.15	Dly												
"	HOU P*	.29	.21	.15	Dly												
"	BRO P*	.27	.17	.15	Dly												
"	LAX P*	.43	.32	.15	Dly												
Tegucigalpa, Hon.	MIA P*	.47	.33	.15	Dly												
"	MSY P*	.40	.23	.15	Dly												
"	HOU P*	.39	.28	.15	Dly												
"	BRO P*	.37	.23	.15	Dly												
"	LAX P*	.43	.32	.15	Dly												
"	MSY P*	.40	.23	.15	Dly except Sa												
"	MEX TA	.53	.18	.....	Dly except Sa												
Tehran, Iran	IDL BO	1.98	1.49	.25	Dly												
"	MIA BO	1.98	1.47	.25	W.S.a												
"	BOS BO	1.98	1.47	.25	Th, Sa												
"	IDL EL	1.98	1.49	.25	W.S.a												
"	IDL AF	1.98	1.47	.25	W.S.a												
"	BOS AF	1.94	1.48	.25	Sa, M, Th												
"	IDL K	1.98	1.49	.25	Sa, M, Th												
"	UL K	2.04	1.53	.27	Sa												
"	IDL SS	1.98	1.49	.25	M, T, Th, F, Sa												
Tel Aviv, Israel	IDL S	1.64	1.23	.25	T, F, Sa												
Tela, Honduras	MSY TA	.42	.25	.....	M, W, F												
"	MEX TA	.28	.19	.....	T, Th, Sa												
Tehran, B.W.I.	IDL BO	.45	.30	.15	M, W, Sa												
"	MIA BO	.40	.28	.....	W.S.a												
Tokyo, Japan	IDL P	3.71	3.04	.25	Sa, T												
"	BOS P	2.03	2.03	.25	Sa, T												
"	LAX P	2.36	1.77	.25	M, T												
"	SFO P	2.36	1.77	.25	M, T												
"	EDF NW	2.36	1.77	.25	Four Wkly												

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(Continued from Page 10)

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Or at least that's the way it seems to this firm, according to our several years' experience with various airfreight lines. We're definitely sold on air transportation.

AIRPORT AT OAKLAND

(Continued from Page 4)

Beach plant finds itself running short of a specific part without which the cars cannot be assembled. A hurried call is put in to the Richmond plant. Within a matter of minutes, the vital parts are being sped along the modern Eastshore Freeway from Richmond to the airport, and in a short time the Airborne carrier is flying the needed cargo for the morning crew at the Long Beach plant.

Airfreight has played an important role in helping companies market their products which are in great demand. Due to a lag caused by World War II shortages, many concerns have been unable to supply consumers at the rate of present demand.

Of these, business machines are an essential part of the stepped-up South American industry. Oakland is the home site for Friden and Marchant calculating machine companies, which have world wide distribution. Shipments by air are not only essential due to the necessity of filling foreign orders and supplying emergency parts, but these firms have found that they can

ship their product faster by air. Some shipments go direct to destination points, such as Mexico City, while others headed for South America are handled from Oakland to Miami or Brownsville, Texas, where foreign carriers pick them up for delivery to the consignee.

In sunny San Leandro, just a few minutes from Oakland Airport, row upon row of hothouses are filled with the blossoms of flowers that supply buyers the year round. With special equipment to keep a constant temperature, The Flying Tigers Line delivers the flowers to New York wholesalers overnight in freezing winter temperatures or summer heat waves so that they are fresh the next day for sale. At the same time, insecticides are brought in for California farmers to use against potential crop destroyers.

High atop the Berkeley hills overlooking the mammoth University of California campus is situated one of the most important scientific installations of our modern age, the University

of California radiation laboratory. Again the proximity of Oakland Airport makes it possible to fly in critically needed materials and machines for operation of this radiation laboratory.

And too, airfreighters have even helped sea freighters. A Pan American plane carried a six-ton drive shaft to the Canal Zone for a steamship, allowing repairs to be made and getting the vessel underway several weeks faster than if the replacement had arrived by sea.

TRADE WITH THE ORIENT

(Continued from Page 5)

"We move everything by air," says one of the leading New York pearl importers. "We have to get it here fast because of the scarcity of the goods and the large amounts of money we have tied up in our purchases."

On shipments of high class pearls the freight and insurance charges come to less than 2% of the value of the shipment. "And in addition," points out



Showing its central location in relation to the cities of the San Francisco Bay Area, Oakland Municipal Airport is depicted here with full detail concerning and explaining projected improvements that are designed to facilitate shipments of airfreight.

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this same importer, "Northwest Airlines handles customs clearance for us at the Minneapolis port-of-entry."

Among the pearl importers who find the speed of air transportation indispensable are Wm. Arnold Co., D'Elia & Sons, L. Borelli, Ben and Morris Richter, and House of Pearls. They buy strands of drilled pearls and loose pearls for manufacturing into jewelry.

Since the pearl season lasts all year except for the two summer months of June and July, some firms maintain buying offices in Japan. Their representatives attend the monthly pearl auctions and visit the pearl farms of Mikimoto, Takashima and Katimura at Kobe, Kyushu and Shikoku. Pearls are

bought by the momme, that is by weight. But the price per momme ranges all the way from 50 cents to \$500. A momme equals 75 grains.

The pearls are paid for in Japan by letter of credit. Ten days later they may be on sale in New York City shops.

By ship, say the pearl importers, delivery takes a minimum of from three to four weeks. Meanwhile the pearls, which have been paid for, are in boxes at the bottom of a ship. The insurance is, in some cases, double that on air shipped goods and there generally are customs delays at the docks.

Development of the pearl market is limited by the time required to grow oysters and then to plant and grow the pearls. However, the supply is slowly and steadily expanding, though prices are currently higher than they were three or four months ago.

As with all airborne Orient trade, the pearl business will keep on improving, say the dealers.

Speed is the keynote.

Big savings in time have been achieved in an important trade with the Philippines. The baby dress industry has annually bought an estimated \$15 million of goods in the Philippine Republic for shipment to the United States. At intervals a great volume of this business is shipped by air—over the short-cut route of the Northwest Passage.

Firms like Shalom Baby-Wear, Inc., ship cotton piece goods to Manila where they are cut, sewn, embroidered, laundered, pressed, packed and shipped back to New York. As the Philippine manufacturers farm out quantities of this work as "home work," the whole

(Concluded on Page 30)

FREIGHT TAKES THE AIR

(Continued from Page 9)

The air has come to be an accepted mode of travel for valuable livestock—dogs, horses, cattle, pigs, even wild animals. Nathoo, a racehorse owned by the Aga Khan, once flew the Atlantic three times in five weeks.

A handful of U. S. companies, none more than five years old, specialize in air freight. In their brief existence, they have twice curtailed their normal operations and dispatched their desperately needed planes and crews to fly for the government, once to Berlin and again to Korea. In between emergencies, they have permanently reshaped some of the patterns of international trade.

One of these international freight carriers is Seaboard & Western Airlines. It flies so-called "irregular" service but has applied for a certificate to make scheduled, advertised international flights. Seaboard, under President Raymond and Executive Vice President Arthur Norden, a pair of ex-Army Transport Command pilots, flies nothing but freight.

Transocean Air Lines, also an international operator, goes in for large-scale passenger charters as well as freight. Its president, Orvis M. Nelson, is another ex-ATC flier.

Still other freight carriers operate chiefly within the United States. The Flying Tiger Line, for example, headed by Robert Prescott, former ace of the Flying Tiger fighter group in China, is one of three lines certified to fly regularly scheduled domestic cargo routes.

Until a few years ago, air freight was a sideline of passenger airlines. Then,



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at the end of the war, hundreds of surplus cargo planes were offered for sale or rent cheap. At the same time, the armed services released thousands of trained pilots, navigators, engineers. Groups of them pooled their resources and went into business.

BEFORE THEY LAUNCHED Seaboard & Western, the Norden brothers made a careful study of costs and of potential traffic. The figures indicated a steady air freight potential, and in both directions, between the United States and Western Europe. They determined to build their operations around this route.

Seaboard started operating with one DC-4, which left New York on May 10, 1947, with general cargo for Brussels, Geneva and Milan. This airplane, the *Geneva Trader*, is still plying the air over the North Atlantic, after more than two million miles of flying for the company.

Though the policy of concentrating on North Atlantic operations has proved sound, this does not mean that the company willingly turns down profitable business elsewhere. There was the time, for instance, that a New York animal dealer called Seaboard's traffic director and inquired, "How about flying a load of elephants from Bangkok?"

It happened, at that moment, that Standard-Vacuum Oil Company needed to get a new rudder stock to one of its tankers, laid up in Singapore. The two jobs dovetailed nicely.

A Seaboard plane flew the six-ton rudder stock to Singapore, hopped to Bangkok and loaded six baby elephants averaging 1,350 pounds each, 116 monkeys, four gibbons, four leopards, a pair

of golden cats and a twenty-three-foot python. The crew spent most of the return trip feeding this menagerie. The python, however, ate seven chickens in Bangkok and slept through to New York.

In a slightly different field, the mass transportation of passengers, Transocean Air Lines has a spectacular list of performances.

Its first big passenger job was to bring 7,000 British immigrants to Canada. Since then it has flown 25,000 refugees from Europe to South America for the U.N.'s International Relief Organization, and 13,000 White Russians from China to South America. Last year it carried 2,000 Iranian pilgrims to Mecca.

When Philippine Air Lines was first established Transocean set up the entire line and ran it for two years under contract. It gave military flight training to sixty Indonesian cadets, nucleus of the republic's new air force. It helped Pak-Air of Pakistan organize its international services. It also did an organization job for Air Djibouti in French Somaliland.

The Flying Tiger Line has not assisted in mass migrations across the oceans, but it has moved a big corporation across a continent over a weekend. This was in 1949, when Arabian American Oil Company transferred its main office from San Francisco to New York. Flying Tiger loaded Aramco's desks, files, safes and everything else aboard a fleet of C-46's after office hours on Friday. The lot was in New York on Saturday, and Aramco was ready for business Monday morning without the loss of a working hour.

When the Russians blockaded Berlin



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in 1948 and commercial planes were needed to support the U. S. Air Force, the hustling young air freight lines were the first to answer the call. They answered it again in Korea, where Seaboard and Transocean are still up to their ears in the air lift.

The existence of these carriers means that the military air transport system has an emergency backstop. Fewer military cargo planes and crews need be kept constantly ready to fly. The freighters are always ready.

TRADE WITH THE ORIENT

(Continued from Page 28)

process from New York to New York used to require up to a year. In order to meet seasonal demands, to cut down on customs delays, to reduce insurance charges and to release capital for a faster turnover, shippers are turning to air.

"Air shipment saves us 35 days at times when we most need it," say these merchants. Before the war this type of business was negligible. Now shipments arrive here every other week. Average wholesale infants-wear price is \$15 a dozen.

Speed is vital to many shippers of Japanese silk products. One textile firm sends its silk scarf designs to Japan where they are executed in beautiful Japanese silk by American methods and to American standards. Modern Japanese manufacturing methods, proximity to raw materials markets and lower labor costs are the advantages of this operation. The difference in labor costs more than covers the airfreight charges and at least one former manu-

facturer in New York has entirely cut out all manufacturing and is completely supplied—by air—from Japan.

An indication of the market for this type goods is the fact that one firm alone has NWA airfreight invoices during several months of last year which ran to a thousand dollars on each of two or three shipments per week. This business has developed entirely since the war and began its present scale of acceleration during 1950.

Baar & Beards, Inc., has opened a buying office in Tokyo and reports that the Japanese are doing beautiful work with colors. Prices for silk scarves made to their own specifications are "right," Baar & Beards reports, and it is a pleasure doing business with the Japanese who are "very, very honorable and scrupulous in all of their contracts."

The insurance rates on this type of air cargo are one-half what they are on the same cargo shipped by steamship. Dock and customs delays are costly, too, according to silk importers. As a result more and more of the lighter grade silks are making the entire voyage by air.

As airfreight rates come down, shippers will fly more of their silk goods, they have stated.

Increasingly large amounts of the lighter weight Japanese silk piece goods are being flown here from Japan, according to silk fabric firms like Cohn, Hall, Marx; Walter Strassburger & Co., Inc., and the Bunge Corporation. Rush seasonal demand accounts for some of the growth of this type of cargo where the weight per yard of the fabric is low. Samplings of all types of silk goods go by air and the possibility of seeing samples of Japanese silk fabric quickly in New York has helped to boost trade in this commodity, according to importers.

One firm which imported over 2,000,000 yards of Japanese silk worth approximately \$2.5 million during the

past 12 months estimates that upwards of a third of this volume, during the peak four months of the year, was flown here over the Northwest Airlines' Orient trade route. The peak of this business is reached during the mid-winter months in preparation for spring promotions. A good conservative estimate of the overall ratio of air shipment to sea shipment, says this firm would be 20%.

"Air shipment avoids delays and

Shipping Samples

speed is important to us," is the opinion of silk fabric importers.

The American Silk Council recalls that during the early post war years when the Japanese were first struggling to revive their silk industry, raw silk was being flown here in bales via Northwest Airlines' newly-inaugurated service.

"Our goods have got to get here in a hurry," say spokesmen for the importers of Oriental goods.

Ignaz Strauss & Co., a medium-sized importer of this type merchandise, buys novelties, fans, earthenware and porcelain in Kobe, Nagoya and Tokyo, and flies sample lots of four or five pieces each here at least once a week.

"There is always something new on the way," says the importers of this type merchandise.

The New York office of SCAP, which is now being closed as its information and promotional functions are being taken over by the Japanese Government Overseas Agency, 60 East 42 St., has exhibited from time to time an endless variety of the products of Japanese industry—everything from hair nets to bicycle seats.

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Samples of these goods are being flown here constantly via NWA. They include such items as small machinery and parts, radio and television parts and tubes, automobile parts, fine ceramics, luxurious brocaded silks, pearls, toys, sporting equipment, photographic and optical equipment.

The Japanese Government Overseas Agency reports that the volume of these products is steadily growing.

Big as the import trade via the Northwest Passage has grown, exports by air have been even greater. Drugs, jewelry and watches, newspapers and magazines, cameras and films, machines, parts, and clothing make up part of a list that is nearly endless.

"We have no choice; it has to go by air!" say the drug manufacturers who have flown huge quantities of antibiotics to the Far East via NWA. Diseases won't wait and products like dihydrostreptomycin or terramycin might be in transit for two months via steamship.

Products like vitamin B-12 cost \$450,000 a kilogram. The cost of air transportation is an infinitesimal fraction of the value of this drug. It would be absurd to send it in a steamship, say the manufacturers.

The Northwest Passage is due to improve the health of the Orient in large doses, considering the volume of this type of air cargo. One drug house here received a cable from its office in a city of Japan this week ordering 100,000 tubes of an antibiotic ophthalmic ointment for treatment of the Orient's prevalent sore eyes. Others are being used in tuberculosis therapy.

One old established drug manufacturer in the class of Charles Pfizer, Merck, Squibb and Lederle has on order with one Japanese medical firm \$300,000 of a single product. This is flown in gallon jars and repacked in small bottles in Japan. The steam-r insurance alone on this product comes to more than the whole air freight bill. Naturally it goes by air.

NEW YORK AIRWAYS

(Continued from Page 6)

tation in the operation of the helicopter."

The first application was filed October 13, 1949; and hearings were held in New York the following spring. James M. Landis, John Marshall and George

J. Solomon handled the case for New York Airways. Weighing heavily in its favor was the fact that we had put together a responsible organization financed to the extent of 1,100,000 dollars.

If certain intangible factors that stand as obstacles in its way can be by-passed, New York Airways will be flying over its allotted shuttle routes to and from the airports and the city's surrounding communities in six months. Dependent upon the firm's ability to do this are those factors just mentioned. Broken down, they are: the war in Korea, and the needs of national defense. For its own part, NYA should like to begin operations with a fleet of 10 or 12 helicopters. But is more likely that it shall have to start with three or four. Inasmuch as helicopters have proven their utility in Korea to great advantage, available helicopters are all heading out toward the fighting fronts. The army, quite understandably, controls the complete output. A great deal, therefore, will depend upon the Department of Defense, to say nothing of the outcome of the Korean war, as to whether or not helicopters will be available to NYA in order to allow it to begin within six months. The needs of national defense must, of course, be primarily served, but so versatile is air transportation in general, and helicopter service in particular that NYA will be able to assist greatly should the dire event of an emergency arise. As the Commissioner of Marine and Aviation, Edward F. Cavanaugh, Jr., said, concerning NYA's planned flights, helicopter service "is essential for the commercial welfare of the community and vital to national and local defense."

In the beginning, mostly mail and property will be flown. Passengers will be carried immediately only over the main shuttle routes, but over the other routes only after a year's experience has been tucked under the belt. By that time, it is also likely that NYA shall be servicing Connecticut as well as New York, but for the time being, its range of operations must be necessarily confined.

Before these operations are begun, however, NYA officials have still to talk with the City Administration, the Triboro Bridge Authority and the Port of New York Authority, to see what they have in mind concerning this service. Since Newark and Queens are intimately involved, as well as Tarrytown, Hackensack, Garden City, Asbury Park, and a considerable number of other leading communities—about 39 all told—they too will probably be consulted.

At present, it is very difficult to tell the exact, or even the average, amount of mail NYA shall carry once it starts flying the mail and other cargo. Nor has it chosen the particular helicopter to be used. Los Angeles Airways uses the Sikorsky S-5, while the New York Port of Authority uses the Bell 47D. If possible, the new carrier hopes to secure a hangar at LaGuardia Field and so make that field its home base. As for a heliport as a central terminal for mail, cargo and passengers in the

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"'New York needs a new and larger airlines terminal,' said Budd. 'Every-

"Helicopters do not need much area in which to land" said Budd, explaining that Westair would not require considerable space. "Although this statement should not be construed as a boost for one type of helicopter against another, I can state quite definitely that the world's biggest helicopter—the PV-3 . . .—is able to land in a 100-foot diameter clearing.

"Of course, Westair can readily be increased in size by additional floors and/or extending down over the railroad tracks toward the Hudson River.

"Particular stress should be made upon the fact that Westair eliminates the necessity of any transportation across midtown Manhattan by the use of over-water routes or low-building areas. It is an important key to air transportation within the city."

"Budd, who is responsible for the organization of the Aviation Section, New York's first civic body devoted to the promotion of civil aviation, has long worked toward bringing airport facilities into the city. He has spent more than two years surveying New York for possible sites and consulting engineers. Several months ago his proposal for an air-rail-bus terminal with the helicopter landing strip, located over the Long Island Railroad depot at Atlantic and Flatbush Avenues, Brooklyn, won wide notice."

In a sense, the need for a heliport in Manhattan will have to fight its own battle for recognition, just as helicopters have had to do. But now that "eggbeaters" have gained their victory, the world in general and the aviation industry in particular are looking forward to greater achievements in design and utility from helicopters. For the future, it appears probable that multi-engine helicopters will tend to replace single-engine types for reasons of both safety and efficiency. Economy will figure in this too, inasmuch as operating cost per ton mile comparable to standard aircraft costs cannot be met until helicopters of at least 20-passenger capacity, or their cargo equivalent, are

... In The Event of Atomic Disaster

Excerpts from a speech delivered by IGOR I. SIKORSKY, Engineering Manager of Sikorsky Aircraft, delivered at the Wings Club Lunch, January, 1952.

I would like to bring up a forecast, which I earnestly hope may never have to be proved under actual conditions. I refer to the use of the helicopters in the event of atomic disaster.

Picture briefly a metropolis like New York. Disaster strikes, streets are impassable because of rubble, subways are clogged, railroads are covered with debris, all usual means of transportation are completely disorganized. Telephones, telegraph and radio stations are out. We have no highways, no utilities, no railroads, a situation of complete isolation, except for the helicopter. Even with the 10-passenger models available today, much can be accomplished.

After a brief aerial survey, civil defense, police and health directors can be landed by helicopters at key locations. Direct from unharmed areas to the heart of the disaster scene, load after load of emergency personnel and equipment can be landed, while on return flight the more seriously injured can be evacuated toward safety and medical help. As a result, thousands may be saved who might have perished.

In particular, helicopters would also prove by far the best instruments for the traffic police officers with their emergency crews to locate and eventually clear up the worst congestions on the streets and arrange for the re-establishment of vehicular traffic in the shortest possible time.

It would be right to state that in general in such emergency the helicopter would prove to be by far the best and frequently the only vehicle of travel capable of rendering urgent and extremely valuable assistance.

. . . there is not the remotest doubt that the helicopter is here to stay and that the outstanding and most encouraging service rendered in war would soon be demonstrated by equally important and expanding service rendered for the general transportation and the peaceful progress of this great country.

used, and the power requirements of large helicopters rather demand the use of more than one engine.

As opposed to standard aircraft, helicopters are a good deal slower than the other, they fly around 100 mph, but the speed angle is being worked upon too. A hybrid version, known as a convertiplane, which will combine the best fea-

tures of both the airplane and the helicopter, is now in the process of development by Bell, Sikorsky, Gyrodyne (which already has a prototype flying) and McDonnell. Gyrodyne's idea is to put additional forward-aimed propellers on a conventional helicopter, while Bell's idea is to mount stub wings on a helicopter and allow the rotors to

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pivot to a vertical position once the craft is airborne. Developers of the convertiplane foresee speeds of 350 mph for this craft, which, if expectations are realized, might very well replace the conventional airplane as we know it today.

This, however, still lies in the future, along with rotary-wing craft bearing detachable bottoms, and atomic aircraft. For the present, bigger and better helicopters for short-haul cargo and passenger traffic are being designed and built. To meet the need for pilots, it has been estimated that there are as many United States pilots currently in training for helicopter flying as for conventional aircraft. England has been keeping pace with the United States in development of this type of craft. In an "atom raid" test held recently in Bristol, the Type 171 helicopter was put into use. An ambulance version of this particular model has also been developed, replete with a housing for bottles of blood plasma and a plug socket for electrically heated blankets to be used in cases of exposure or

shock. To the Helicopter Association in England, O. L. L. Fitzwilliams, of Westland Aircraft Ltd., mentioned a hypothetical family of giant helicopters, even the largest of which presented no fundamentally serious constructional difficulty.

The "smallest member of the family," said Fitzwilliams, would be a 53,000-pound helicopter, with three rotor



blades and a top speed of 120 miles-an-hour. Six *Adder* jets, in pairs, would be fitted to the blade tips. The load the helicopter would be able to carry was estimated at 61% of its all-up weight—so that it could carry a 15-ton tank on a one hour flight or 102 lightly armed troops on a two hour flight, or their cargo equivalent.

The "medium Giant" described by Fitzwilliams, would be powered by a single *Sapphire* jet engine at the end of each of the three rotor blades—which would have a sweep diameter of 200 ft. This helicopter would be theoretically capable of carrying 24 tons over 500 miles in five hours, 39 tons over 300 miles in three hours, or 54 tons over 100 miles in one hour.

Without wings, in some cases with little more than a skeleton fuselage attached to a plastic cockpit, helicopters have been carrying cargo, mail, munitions, troops and ambulance cases successfully, and have won recognition for their services. Officially, this recognition has come in the form of government purchases of helicopters for Korea (purchases of helicopters by the army have recently exceeded the purchases

of trucks), governmental approval, through the Civil Aeronautics Board of helicopter service for Chicago, Los Angeles and New York, and by the winning of the Collier trophy.

For the sixteenth time in the trophy's 40-year history, the coveted award—the nation's top aviation award—has gone to a group rather than to an individual for outstanding service. The citation reads:

To the helicopter industry, the military services, and the Coast Guard for development and use of rotary-wing aircraft for air rescue operations.

Awarded annually by the National Aeronautic Association to the individual or group that has performed "the greatest achievement in America, the value of which has been demonstrated by actual use in the preceding year," this time the award went deservedly to the helicopter industry.

With such widespread recognition of their considerable achievements showed upon helicopters, with newer versions and better service being planned, these planes are expected to become the cargo trucks of the air. With helicopters used increasingly in civilian traffic, air cargo has still greater assurance of having the best and quickest, the surest and safest means of transportation yet devised by man. Even without wings, helicopters have proved their worth.

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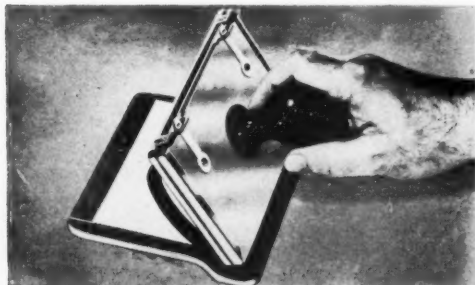
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